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Area Wage Survey

Minneapolis-St. Paul, Minnesota-Wisconsin, Metropolitan Area, January 1985

U.S. Department of Labor
Bureau of Labor Statistics

Bulletin 3030-1

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Preface

This bulletin provides results of a January 1985 survey of occupational earnings in the Minneapolis-St. Paul, MN-WI, Standard Metropolitan Statistical Area. The survey was made as part of the Bureau of Labor Statistics' annual area wage survey program. It was conducted by the Bureau's regional office in Chicago, IL, under the general direction of Lois L. Orr, Assistant Regional Commissioner for Operations. The survey could not have been accomplished without the cooperation of the many firms whose wage and salary data provided the basis for the statistical information in this bulletin. The Bureau wishes to express sincere appreciation for the cooperation received.

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Note:

Reports on occupational earnings and employee benefits in the Minneapolis-St.Paul area are available for the hotels and motels (August 1983) and machinery manufacturing (November 1983) industries. These reports are available from the Bureau's Regional Offices. Regional Offices also have available five summary releases: *Occupational Earnings and Wage Trends in Metropolitan Areas* (3 parts); *Occupational Earnings in All Metropolitan Areas* (combined); and *Wage Differences Among Metropolitan Areas.*

A summary bulletin, *Area Wage Surveys, Selected Metropolitan Areas,* provides wage data for 70 areas in the Area Wage Survey program. This annual bulletin may be purchased from the Superintendent of Documents or from BLS Regional Offices.

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Area Wage Survey

Minneapolis-St. Paul, Minnesota-Wisconsin, Metropolitan Area, January 1985

U.S. Department of Labor
Raymond J. Donovan, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner

March 1985
Bulletin 3030-1

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Introduction

This area is 1 of 70 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related benefits. (See list of areas on inside back cover.) In each area, earnings data for selected occupations (A-series tables) are collected annually. Information on establishment practices and employee benefits (B-series tables) is obtained every third year. This report has no B-series tables.

A major consideration in the area wage survey program is the need to describe the level and movement of wages in a variety of labor markets, through the analysis of (1) the level and distribution of wages by occupation, and (2) the movement of wages by occupational category and skill level. The program develops information that may be used for many purposes, including wage and salary administration, collective bargaining, and assistance in determining plant location. Survey results also are used by the U.S. Department of Labor to make wage determinations under the Service Contract Act of 1965.

A-series tables

Tables A-1 through A-6 provide estimates of straight-time weekly or hourly earnings for workers in occupations common to a variety of manufacturing and nonmanufacturing industries. Where possible, occupations with related duties (e.g. accounting clerks and payroll clerks) are clustered to facilitate comparison. The occupations are defined in appendix B. For the 31 largest survey areas, tables A-12 through A-17 provide similar data for establishments employing 500 workers or more.

Table A-7 provides indexes and percent changes in average hourly earnings for office clerical workers, electronic data processing workers, industrial nurses, skilled maintenance trades workers, and unskilled plant workers. Where possible, data are presented for all industries and for manufacturing and nonmanufacturing separately. Data are not presented for skilled maintenance workers in nonmanufacturing because the number of workers employed in this occupational group in nonmanufacturing is too small to warrant separate presentation. This table provides a measure of wage trends after elimination of changes in average earnings caused by employment shifts among establishments as well as turnover of establishments included in survey samples. For further details, see appendix A.

Tables A-8 through A-11 provide measures of pay relationships in establishments. These measures may differ considerably from the pay relationships of overall area averages published in tables A-1 through A-6. See appendix A for details.

Appendixes

Appendix A describes the methods and concepts used in the area wage survey program and provides information on the scope of the survey.

Appendix B provides job descriptions used by Bureau field representatives to classify workers by occupation.

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Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Average weekly hours (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean	Median	Middle range	140 and under 160	160 - 180	180 - 200	200 - 220	220 - 240	240 - 260	260 - 280	280 - 300	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 420	420 - 440	440 - 460	460 - 480	480 - 520	520 - 560	560 - 600	600 - 640
Secretaries	5,645	39.5	340.00	332.50	295.50- 378.50	-	-	-	35	62	292	524	637	691	612	699	519	424	376	201	140	91	89	25	25	3
Manufacturing	3,172	39.5	337.00	326.50	295.00- 376.50	-	-	-	2	31	162	301	429	546	374	316	262	265	163	118	92	57	50	2	-	1
Nonmanufacturing	2,473	39.5	343.50	340.00	299.50- 380.00	-	-	-	33	31	130	223	209	145	236	381	257	159	213	83	48	34	39	23	25	2
Transportation and utilities	342	40.0	389.50	400.50	348.00- 427.00	-	-	-	-	-	-	14	7	19	29	35	29	36	72	23	21	6	24	16	7	2
Secretaries I																										
Nonmanufacturing	124	39.0	308.50	317.50	265.00- 353.00	-	-	-	-	12	12	23	8	15	6	35	-	5	5	-	-	-	-	-	-	-
Secretaries II	1,152	39.5	312.00	309.50	277.50- 348.00	-	-	-	34	39	96	140	151	221	122	143	131	29	22	6	15	-	3	-	-	-
Manufacturing	619	39.5	313.00	312.50	286.00- 342.50	-	-	-	1	22	48	58	93	156	76	74	62	21	6	-	1	-	-	-	-	-
Nonmanufacturing	534	39.5	310.50	304.50	263.00- 353.00	-	-	-	33	17	48	82	58	65	46	69	69	8	16	6	14	-	3	-	-	-
Transportation and utilities	109	40.0	377.50	367.00	349.00- 404.00	-	-	-	-	-	-	7	-	5	10	16	20	6	16	6	14	-	3	-	-	-
Secretaries III	1,440	39.5	329.00	323.50	288.50- 352.50	-	-	-	-	2	76	106	241	342	311	215	116	79	119	22	5	1	1	1	3	-
Manufacturing	752	40.0	322.50	318.50	289.50- 340.50	-	-	-	-	-	17	48	129	187	160	94	45	28	9	11	2	-	1	1	-	-
Nonmanufacturing	688	39.5	334.00	329.50	298.00- 367.00	-	-	-	-	2	59	58	112	155	131	121	71	51	110	11	3	1	-	-	3	-
Transportation and utilities	132	40.0	374.50	374.00	321.50- 417.00	-	-	-	-	-	-	7	1	14	19	12	6	2	47	9	3	1	-	-	3	-
Secretaries IV	1,296	40.0	364.50	362.00	333.00- 393.00	-	-	-	-	-	11	60	40	157	98	257	196	202	120	63	28	11	39	7	7	-
Manufacturing	688	40.0	375.50	376.50	347.00- 396.00	-	-	-	-	-	-	-	9	43	51	119	142	164	87	30	14	4	19	-	-	-
Nonmanufacturing	608	39.5	352.50	345.50	307.00- 360.50	-	-	-	-	-	11	60	31	106	47	138	54	38	33	33	14	7	20	7	7	-
Transportation and utilities	56	40.0	439.00	438.50	360.00- 497.50	-	-	-	-	-	-	-	-	-	-	7	1	12	6	3	3	5	12	5	2	-
Secretaries V	671	40.0	424.50	424.50	392.50- 458.00	-	-	-	-	-	-	-	5	6	19	25	58	94	107	109	91	79	46	15	15	3
Nonmanufacturing	297	40.0	423.50	409.50	381.50- 455.00	-	-	-	-	-	-	-	-	2	7	12	52	54	49	32	16	26	16	14	15	2
Transportation and utilities	47	40.0	467.00	461.50	392.50- 529.00	-	-	-	-	-	-	-	-	-	-	-	-	14	3	5	1	2	9	9	2	2
Stenographers	144	39.5	368.00	352.00	274.50- 472.00	-	-	5	6	7	13	10	6	20	3	9	-	4	1	20	-	7	23	-	-	10
Manufacturing	62	39.5	265.00	267.00	234.50- 315.00	-	-	5	6	7	10	10	5	19	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	82	40.0	446.50	421.00	345.00- 497.00	-	-	-	-	-	3	-	1	1	3	9	-	4	1	20	-	7	23	-	-	10
Transportation and utilities	82	40.0	446.50	421.00	384.00- 497.00	-	-	-	-	-	3	-	1	1	3	9	-	4	1	20	-	7	23	-	-	10
Stenographers I	96	39.5	317.00	304.00	266.50- 471.00	-	-	4	5	5	8	7	2	3	3	9	-	4	-	20	-	7	9	-	-	10
Manufacturing	67	40.0	435.50	421.00	354.00- 486.50	-	-	-	-	-	3	-	1	1	3	9	-	4	-	20	-	7	9	-	-	10
Nonmanufacturing	67	40.0	435.50	421.00	354.00- 486.50	-	-	-	-	-	3	-	1	1	3	9	-	4	-	20	-	7	9	-	-	10
Typists	867	39.5	270.00	255.00	229.50- 300.50	22	27	29	74	149	156	106	61	111	7	4	10	2	26	57	-	-	7	-	-	-
Manufacturing	319	39.5	259.00	251.00	240.00- 293.00	-	-	7	40	30	116	19	69	31	1	4	-	2	-	-	-	-	-	-	-	-
Nonmanufacturing	548	39.5	276.50	260.00	226.50- 318.00	22	27	21	34	119	40	87	12	80	6	-	10	-	26	57	-	-	7	-	-	-
Typists I	649	39.5	261.50	246.00	222.00- 293.00	22	27	27	69	130	96	90	52	71	-	-	-	-	6	57	-	-	2	-	-	-
Manufacturing	169	39.0	248.00	241.00	219.00- 293.00	-	-	7	37	12	62	6	40	3	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	480	39.5	266.50	248.00	222.00- 300.50	22	27	20	32	118	34	82	12	68	-	-	-	-	6	57	-	-	2	-	-	-
Typists II	218	39.5	295.00	281.00	249.00- 316.50	-	-	1	5	19	60	16	29	40	7	4	10	2	20	-	-	-	5	-	-	-
Manufacturing	150	39.5	271.50	260.00	244.50- 293.00	-	-	-	3	18	54	11	29	28	1	4	-	2	-	-	-	-	-	-	-	-
Word processors	729	39.5	301.50	299.00	272.50- 324.00	-	-	-	20	13	64	103	151	139	67	59	24	15	16	5	1	1	-	-	-	-
Manufacturing	290	40.0	312.50	305.00	280.00- 336.00	-	-	-	-	2	9	38	69	73	35	29	14	11	5	5	-	-	-	-	-	-
Nonmanufacturing	439	39.5	294.50	293.00	262.00- 313.00	-	-	-	20	11	75	65	82	66	32	40	10	4	11	-	1	1	-	-	-	-
Word processors I	329	39.5	279.50	281.00	253.00- 301.00	-	-	-	20	9	68	38	98	67	20	9	-	-	-	-	-	-	-	-	-	-
Manufacturing	116	40.0	293.00	296.50	280.00- 305.50	-	-	-	-	1	5	18	43	33	10	6	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	213	39.5	272.50	276.00	248.00- 299.50	-	-	-	20	8	63	20	55	34	10	3	-	-	-	-	-	-	-	-	-	-
Word processors II	399	39.5	319.50	315.00	289.50- 351.00	-	-	-	-	4	16	65	53	72	67	60	24	15	16	5	1	1	-	-	-	-
Manufacturing	174	40.0	325.50	318.50	298.50- 353.00	-	-	-	-	1	4	20	26	40	25	23	14	11	5	5	-	-	-	-	-	-
Nonmanufacturing	225	39.5	315.00	311.50	277.50- 346.00	-	-	-	-	3	12	45	27	32	42	37	10	4	11	-	1	1	-	-	-	-

See footnotes at end of tables.

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Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours (standard)	Weekly earnings (in dollars)			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[1]	Median[1]	Middle range[1]	140 and under 160	160 – 180	180 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 520	520 – 560	560 – 600	600 – 640
File clerks	704	39.5	207.00	204.00	180.00– 222.00	73	99	152	184	107	22	28	14	3	–	14	–	–	–	–	1	2	5	–	–	–
Nonmanufacturing	532	39.5	202.50	191.50	171.00– 221.00	73	99	146	77	72	10	21	11	1	–	14	–	–	–	–	1	2	5	–	–	–
Transportation and utilities	25	40.0	326.50	270.00	262.00– 479.00	–	–	4	–	1	–	11	–	1	–	–	–	–	–	–	1	2	5	–	–	–
File clerks I	354	39.5	191.00	192.00	160.00– 209.50	73	49	65	134	33	–	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	280	39.5	184.50	183.50	156.00– 204.00	73	49	63	59	26	–	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–
File clerks II	298	39.5	216.00	214.50	191.50– 227.00	–	50	79	46	73	16	16	–	1	–	14	–	–	–	–	–	2	–	–	–	–
Nonmanufacturing	217	39.5	212.50	196.00	180.00– 229.00	–	50	75	14	45	6	11	–	–	–	14	–	–	–	–	–	2	–	–	–	–
Messengers	367	39.5	214.50	200.50	181.00– 228.00	–	70	111	62	42	29	12	6	3	3	–	–	–	1	–	1	1	4	–	2	–
Manufacturing	126	39.0	218.00	212.00	198.50– 234.00	–	7	26	53	14	21	2	3	2	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	239	39.5	212.50	193.50	176.50– 223.00	–	63	85	29	28	8	10	3	1	3	–	–	–	1	–	1	1	4	–	2	–
Transportation and utilities	26	40.0	344.50	305.50	239.50– 466.50	–	–	1	–	6	3	–	3	1	3	–	–	–	1	–	1	1	4	–	2	–
Receptionists	197	39.5	241.00	240.00	216.00– 266.50	–	1	23	61	15	31	29	15	17	1	4	–	–	–	–	–	–	–	–	–	–
Manufacturing	82	40.0	236.50	216.00	216.00– 256.00	–	–	–	44	4	15	13	6	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	115	39.5	244.50	242.50	200.00– 267.00	–	1	23	17	11	16	16	9	17	1	4	–	–	–	–	–	–	–	–	–	–
Switchboard operators	262	39.5	261.50	228.00	205.50– 296.00	–	14	19	63	21	25	14	21	13	6	24	1	1	3	–	2	15	–	–	–	–
Manufacturing	63	39.5	312.00	319.50	273.50– 355.00	–	–	–	–	3	7	5	7	7	6	24	–	1	–	–	–	–	–	–	–	–
Nonmanufacturing	199	40.0	245.50	213.50	200.00– 256.50	–	14	19	63	18	18	9	14	6	–	–	1	–	3	–	2	15	–	–	–	–
Transportation and utilities	36	40.0	365.00	401.50	242.00– 474.50	–	–	–	–	6	7	–	–	–	–	–	1	–	3	–	2	15	–	–	–	–
Switchboard operator-receptionists	475	40.0	251.50	242.00	219.50– 280.00	–	6	101	116	161	179	91	141	16	15	2	15	5	1	4	20	–	–	–	–	–
Manufacturing	314	39.5	246.50	242.00	225.50– 259.00	–	–	29	46	55	108	15	46	1	7	2	1	3	1	–	–	–	–	–	–	–
Nonmanufacturing	161	40.0	254.00	242.50	219.50– 280.00	–	6	72	72	106	71	76	95	15	8	–	14	2	–	4	20	–	–	–	–	–
Transportation and utilities	61	39.5	242.50	229.00	220.00– 242.00	–	6	–	7	32	10	–	–	–	–	–	–	2	–	4	–	–	–	–	–	–
Order clerks	645	40.0	292.00	284.50	240.00– 313.50	–	–	14	34	149	130	103	68	189	78	11	6	22	10	9	21	14	11	6	–	–
Manufacturing	452	40.0	305.50	299.50	244.50– 319.50	–	–	–	16	84	24	45	67	104	38	11	6	2	8	9	7	14	11	6	–	–
Nonmanufacturing	443	40.0	278.50	264.00	240.00– 310.00	–	–	14	18	65	106	58	21	85	40	–	–	20	2	–	14	–	–	–	–	–
Order clerks I	624	40.0	263.00	259.00	236.50– 294.50	–	–	14	34	149	129	102	53	108	26	6	–	1	1	1	–	–	–	–	–	–
Manufacturing	258	40.0	268.00	265.50	236.50– 294.50	–	–	–	16	84	23	44	33	23	26	6	–	1	1	1	–	–	–	–	–	–
Nonmanufacturing	366	40.0	259.50	259.00	236.00– 284.50	–	–	14	18	65	106	58	20	85	–	–	–	–	–	–	–	–	–	–	–	–
Order clerks II	271	40.0	359.00	330.00	312.00– 408.50	–	–	–	–	–	1	1	35	81	52	5	6	21	9	8	21	14	11	6	–	–
Manufacturing	194	40.0	355.50	316.00	306.00– 408.50	–	–	–	–	–	1	1	34	81	42	5	6	1	7	8	7	14	11	6	–	–
Accounting clerks	7,910	39.5	290.00	280.00	240.00– 321.50	5	60	309	572	906	1,202	746	1006	1004	455	348	343	246	146	196	24	31	115	90	6	–
Manufacturing	2,636	39.5	294.00	293.00	251.50– 325.00	–	–	35	148	224	445	277	420	529	226	216	161	93	22	16	5	18	1	–	–	–
Nonmanufacturing	5,074	40.0	287.50	286.50	230.50– 318.00	5	60	274	524	682	757	469	586	475	229	132	182	153	124	180	19	13	114	90	6	–
Transportation and utilities	1,294	40.0	373.00	381.00	312.50– 421.00	–	–	5	1	17	119	70	55	164	88	34	71	125	116	177	19	3	114	90	6	–
Accounting clerks I	863	39.5	231.50	225.00	203.00– 250.00	5	30	96	256	189	122	45	58	53	2	2	–	–	3	2	–	–	–	–	–	–
Manufacturing	327	39.5	252.50	244.00	225.00– 276.50	–	–	–	62	72	84	30	27	51	–	–	–	–	1	–	–	–	–	–	–	–
Nonmanufacturing	536	39.5	219.00	211.00	201.50– 232.00	5	30	96	194	117	38	15	31	2	2	2	–	–	2	2	–	–	–	–	–	–
Transportation and utilities	43	40.0	273.50	265.50	235.50– 297.50	–	–	5	–	7	7	7	7	2	2	2	–	–	2	2	–	–	–	–	–	–
Accounting clerks II	3,227	40.0	256.00	249.50	229.50– 288.00	–	30	211	351	554	608	302	519	307	53	37	6	43	–	–	–	–	–	–	–	–
Manufacturing	1,009	39.5	265.00	257.50	243.50– 293.00	–	–	33	85	46	316	107	196	146	21	11	2	6	–	–	–	–	–	–	6	–
Nonmanufacturing	2,218	40.0	251.50	248.00	221.50– 286.00	–	30	178	266	468	492	195	323	161	32	26	4	37	–	–	–	–	–	–	–	–
Transportation and utilities	265	40.0	289.00	264.00	243.50– 312.50	–	–	–	1	10	112	39	46	21	6	6	1	37	–	–	–	–	–	–	6	–

See footnotes at end of tables.

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Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[3]	Middle range[4]	140 and under 160	160 – 180	180 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 520	520 – 560	560 – 600	600 – 640
Accounting clerks II	2,625	39.1	306.50	312.50	284.00 – 342.00	–	–	2	65	160	272	363	366	506	219	151	102	130	118	61	5	–	–	–	–	–
Manufacturing	329	39.0	307.50	316.00	280.50 – 332.50	–	–	2	1	66	45	119	166	246	64	61	57	50	6	5	1	–	–	–	–	–
Nonmanufacturing	1,696	40.0	308.00	315.50	282.00 – 350.00	–	–	–	64	97	227	244	202	260	135	70	125	80	112	76	4	–	–	–	–	–
Transportation and utilities	620	40.0	361.50	370.00	318.00 – 402.50	–	–	–	–	–	–	24	2	161	73	22	70	78	110	76	4	–	–	–	–	–
Accounting clerks IV	1,195	39.5	360.50	360.50	328.00 – 421.00	–	–	–	–	–	–	36	61	139	161	158	155	73	25	113	19	31	115	80	–	–
Manufacturing	571	39.5	348.00	343.50	321.50 – 370.50	–	–	–	–	–	–	21	31	86	121	124	102	37	15	11	4	18	1	–	–	–
Nonmanufacturing	624	40.0	416.00	421.00	339.00 – 507.00	–	–	–	–	–	–	15	30	52	40	34	53	36	10	102	15	13	114	80	–	–
Transportation and utilities	148	40.0	475.50	507.00	421.00 – 520.50	–	–	–	–	–	–	–	–	–	7	4	–	10	4	99	15	3	114	80	–	–
Payroll clerks	694	40.0	311.00	309.50	283.00 – 340.00	–	–	35	5	26	79	105	62	76	133	74	17	14	6	23	12	7	16	4	–	–
Manufacturing	290	40.0	323.50	324.00	295.50 – 334.50	–	–	–	–	1	33	18	22	42	100	35	6	2	2	21	1	1	–	–	–	–
Nonmanufacturing	406	40.0	302.50	299.50	278.50 – 344.00	–	–	35	5	25	46	87	40	34	33	39	9	12	4	2	11	6	16	4	–	–
Transportation and utilities	92	40.0	365.50	345.00	304.00 – 420.00	–	–	5	–	–	1	11	3	14	10	11	3	6	4	2	1	1	16	4	–	–
Key entry operators	2,285	39.5	272.50	264.50	242.50 – 298.00	–	75	49	102	309	459	435	299	232	116	101	19	26	22	–	11	25	5	–	–	–
Manufacturing	726	39.5	261.50	270.00	242.50 – 287.50	–	58	29	33	42	151	154	143	77	26	3	5	3	1	–	1	–	–	–	–	–
Nonmanufacturing	1,559	39.5	278.00	268.00	242.50 – 302.00	–	17	20	69	266	308	281	155	155	90	98	14	25	21	–	10	25	5	–	–	–
Transportation and utilities	177	40.0	349.00	333.50	277.00 – 402.50	–	–	3	–	1	33	21	8	17	8	3	11	11	21	–	10	25	5	–	–	–
Key entry operators I	1,162	39.5	255.50	247.00	223.00 – 280.00	–	75	49	99	236	276	136	64	66	29	79	5	16	1	–	10	–	–	–	–	–
Manufacturing	440	39.0	243.50	244.50	210.00 – 275.50	–	58	29	33	42	116	56	71	26	6	1	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	722	39.5	263.50	247.00	227.00 – 291.50	–	17	20	66	194	158	80	13	40	23	78	5	16	1	–	10	–	–	–	–	–
Transportation and utilities	66	39.5	306.50	247.00	245.00 – 379.00	–	–	3	–	1	33	–	1	1	4	3	5	4	1	–	10	–	–	–	–	–
Key entry operators II	1,123	40.0	290.50	280.00	260.00 – 304.50	–	–	–	3	72	160	299	214	166	88	22	14	10	21	–	1	25	5	–	–	–
Manufacturing	286	39.5	289.00	284.00	271.50 – 303.00	–	–	–	–	–	33	89	72	51	20	2	5	3	1	–	1	–	–	–	–	–
Nonmanufacturing	837	40.0	291.00	279.50	255.00 – 305.00	–	–	–	3	72	150	201	142	115	68	20	9	7	20	–	–	25	5	–	–	–
Transportation and utilities	111	40.0	374.00	398.50	284.00 – 479.50	–	–	–	–	–	–	21	7	16	4	–	6	–	20	–	–	25	5	–	–	–

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[1]	Median[2]	Middle range[1]	Under 240	240 and under 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 460	460 – 500	500 – 540	540 – 580	580 – 620	620 – 660	660 – 700	700 – 740	740 – 780	780 – 820	820 – 860
Computer systems analysts (business)	1,970	39.5	614.00	616.00	537.50- 692.50	-	-	-	-	-	-	12	20	14	20	82	148	212	221	285	263	270	192	133	70	28
Manufacturing	932	39.5	626.00	629.00	553.50- 699.00	-	-	-	-	-	-	-	8	-	9	34	61	90	96	144	113	150	111	69	34	13
Nonmanufacturing	1,038	40.0	603.00	598.50	528.00- 681.50	-	-	-	-	-	-	12	12	14	11	48	87	122	125	141	150	120	81	64	36	15
Transportation and utilities	175	40.0	636.00	634.50	571.00- 700.50	-	-	-	-	-	-	-	-	-	4	5	6	10	24	20	45	17	17	9	13	5
Computer systems analysts (business) I	246	39.5	486.00	484.50	429.00- 538.50	-	-	-	-	-	-	12	19	12	15	33	52	43	24	19	12	5	-	-	-	-
Manufacturing	123	40.0	490.00	484.00	454.00- 532.00	-	-	-	-	-	-	-	7	-	9	19	36	28	14	7	2	1	-	-	-	-
Nonmanufacturing	123	39.5	482.00	486.50	394.00- 568.00	-	-	-	-	-	-	12	12	12	6	14	16	15	10	12	10	4	-	-	-	-
Computer systems analysts (business) II	825	39.5	573.00	570.00	523.00- 621.00	-	-	-	-	-	-	-	1	-	4	40	84	169	162	155	113	60	26	10	1	-
Manufacturing	397	39.5	592.00	591.00	537.50- 642.00	-	-	-	-	-	-	-	1	-	-	15	25	62	75	93	56	38	21	10	1	-
Nonmanufacturing	428	40.0	555.00	546.00	509.00- 596.00	-	-	-	-	-	-	-	-	-	4	25	59	107	87	62	57	22	5	-	-	-
Transportation and utilities	81	40.0	594.00	623.00	544.50- 649.00	-	-	-	-	-	-	-	-	-	4	5	3	5	13	10	27	9	5	-	-	-
Computer systems analysts (business) III	899	39.5	686.50	692.50	640.50- 738.50	-	-	-	-	-	-	-	-	2	1	9	12	-	35	111	138	205	166	123	69	28
Manufacturing	412	39.5	699.50	697.00	657.50- 742.50	-	-	-	-	-	-	-	-	-	-	-	-	-	7	44	55	111	90	59	33	13
Nonmanufacturing	487	40.0	675.50	687.00	623.00- 738.50	-	-	-	-	-	-	-	-	2	1	9	12	-	28	67	83	94	76	64	36	15
Transportation and utilities	53	40.0	737.50	749.50	698.00- 788.00	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	8	4	12	9	13	5
Computer programmers (business)	3,414	39.5	469.00	461.50	392.50- 537.00	-	-	51	41	72	186	227	163	229	202	524	545	350	331	168	131	95	72	24	3	-
Manufacturing	1,323	39.5	516.00	520.00	441.00- 600.00	-	-	34	16	8	16	57	42	32	44	118	243	160	163	120	113	86	60	8	3	-
Nonmanufacturing	2,091	39.5	437.50	427.00	374.50- 485.00	-	-	17	25	64	170	170	121	197	158	406	302	190	168	48	18	9	12	16	-	-
Transportation and utilities	256	40.0	489.00	461.50	398.50- 553.50	-	-	-	-	1	1	25	40	13	43	30	30	24	14	13	9	12	1	-	-	
Computer programmers (business) I	710	39.5	359.00	345.50	324.50- 374.50	-	-	51	33	60	179	164	56	29	27	31	40	30	9	-	1	-	-	-	-	-
Manufacturing	246	40.0	395.00	391.50	324.50- 476.00	-	-	34	16	6	15	35	12	8	23	27	31	29	9	-	1	-	-	-	-	-
Nonmanufacturing	464	39.5	340.00	336.50	324.50- 357.50	-	-	17	17	54	164	129	44	21	4	4	9	1	-	-	-	-	-	-	-	-
Computer programmers (business) II	1,618	39.5	464.50	451.50	404.00- 514.50	-	-	-	8	12	7	63	96	147	145	361	307	166	184	86	27	8	1	-	-	-
Manufacturing	655	39.5	501.50	496.50	448.00- 559.50	-	-	-	-	2	1	22	30	24	19	82	171	75	121	73	26	8	1	-	-	-
Nonmanufacturing	963	39.5	439.50	427.00	398.50- 474.50	-	-	-	8	10	6	41	66	123	126	279	136	91	63	13	1	-	-	-	-	-
Transportation and utilities	179	40.0	454.50	438.50	392.50- 517.00	-	-	-	-	-	1	1	16	40	12	41	16	22	18	11	1	-	-	-	-	-
Computer programmers (business) III	1,086	39.5	547.00	531.00	471.00- 629.00	-	-	-	-	-	-	-	11	53	30	132	198	154	138	82	103	87	71	24	3	-
Manufacturing	422	39.5	615.50	632.00	537.50- 677.50	-	-	-	-	-	-	-	-	-	2	9	41	56	33	47	86	78	59	8	3	-
Nonmanufacturing	664	39.5	503.50	484.50	447.00- 550.50	-	-	-	-	-	-	-	11	53	28	123	157	98	105	35	17	9	12	16	-	-
Transportation and utilities	57	40.0	619.00	646.00	542.50- 694.50	-	-	-	-	-	-	-	-	-	1	1	5	7	6	3	12	9	12	1	-	-
Computer operators	2,082	39.5	339.50	333.50	288.50- 376.00	64	112	252	170	270	258	250	222	149	124	102	44	43	13	8	1	-	-	-	-	-
Manufacturing	996	39.5	338.50	334.50	295.50- 375.00	12	45	120	75	152	140	122	124	87	47	41	10	16	2	2	1	-	-	-	-	-
Nonmanufacturing	1,086	39.5	340.50	330.00	283.50- 381.50	52	67	132	95	118	118	128	98	62	77	61	34	27	11	6	-	-	-	-	-	-
Transportation and utilities	167	40.0	428.00	402.50	366.50- 518.00	-	-	15	6	2	4	6	18	6	35	11	20	27	11	6	-	-	-	-	-	-
Computer operators I	380	40.0	288.50	280.50	264.50- 314.50	* 46	32	102	42	79	46	16	9	5	1	-	1	-	-	1	-	-	-	-	-	-
Manufacturing	251	40.0	295.00	288.50	265.00- 312.00	11	24	69	33	61	28	10	7	5	1	-	1	-	-	1	-	-	-	-	-	-
Nonmanufacturing	129	39.5	276.00	277.50	236.50- 317.50	35	8	33	9	18	18	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Computer operators II	1,225	39.5	334.00	327.50	288.50- 365.50	18	80	148	112	182	176	165	102	76	80	56	3	23	3	-	1	-	-	-	-	-
Manufacturing	548	39.5	341.00	337.50	306.00- 374.00	1	21	49	34	88	93	86	55	60	26	33	1	-	-	-	1	-	-	-	-	-
Nonmanufacturing	677	39.5	328.50	317.50	279.00- 359.00	17	59	99	78	94	83	79	47	16	54	23	2	23	3	-	-	-	-	-	-	-
Transportation and utilities	96	40.0	410.50	402.50	361.00- 518.00	-	-	13	2	2	4	-	13	1	33	2	2	23	3	-	-	-	-	-	-	-

See footnotes at end of tables.

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Table A-2. Weekly earnings of professional and technical workers in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	Under 240	240 and under 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 460	460 – 500	500 – 540	540 – 580	580 – 620	620 – 660	660 – 700	700 – 740	740 – 780	780 – 820	820 – 860
Computer operators III	477	39.5	395.00	377.50	353.50– 424.00	-	-	2	16	9	36	69	111	68	43	46	40	20	10	7	-	-	-	-	-	-
Manufacturing	197	39.5	387.00	376.00	350.00– 406.00	-	-	2	8	3	19	26	62	22	20	8	8	16	2	1	-	-	-	-	-	-
Nonmanufacturing	280	39.5	400.50	387.50	357.00– 433.00	-	-	-	8	6	17	43	49	46	23	38	32	4	8	6	-	-	-	-	-	-
Transportation and utilities	59	40.0	476.50	494.00	425.00– 530.50	-	-	-	-	-	-	2	5	5	2	9	18	4	8	6	-	-	-	-	-	-
Peripheral equipment operators	126	40.0	291.50	294.00	254.00– 322.50	• • 25	14	14	18	17	21	5	4	4	3	1	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	60	40.0	260.00	259.50	235.50– 282.00	19	11	14	11	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Computer data librarians	92	39.5	301.50	295.00	265.50– 317.00	2	14	26	16	12	10	3	2	1	1	2	2	-	1	-	-	-	-	-	-	-
Nonmanufacturing	79	39.5	301.50	282.50	265.50– 331.00	2	13	24	10	10	10	2	2	-	1	2	2	-	1	-	-	-	-	-	-	-
Drafters	2,379	40.0	416.00	400.00	355.00– 467.50	3	14	70	79	97	108	279	232	247	247	349	230	160	157	48	39	20	-	-	-	-
Manufacturing	1,617	40.0	420.00	407.50	353.00– 473.00	-	4	50	54	72	79	202	121	164	160	242	163	111	111	39	31	14	-	-	-	-
Nonmanufacturing	762	40.0	408.00	399.50	360.00– 456.00	3	10	20	25	25	29	77	111	83	87	107	67	49	46	9	8	6	-	-	-	-
Transportation and utilities	56	40.0	440.50	393.00	374.50– 538.50	3	-	-	-	-	-	-	14	12	2	3	3	5	12	-	2	-	-	-	-	-
Drafters II	127	40.0	325.50	323.50	297.50– 350.00	-	3	-	29	24	28	20	15	8	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	116	40.0	325.00	323.50	302.00– 348.00	-	3	-	25	22	28	20	10	8	-	-	-	-	-	-	-	-	-	-	-	-
Drafters III	539	40.0	351.00	352.00	320.00– 385.50	-	1	50	44	39	70	113	57	65	51	48	1	-	-	-	-	-	-	-	-	-
Manufacturing	407	40.0	349.00	352.00	300.00– 389.50	-	1	50	29	39	49	80	38	43	34	43	1	-	-	-	-	-	-	-	-	-
Nonmanufacturing	132	40.0	356.50	355.50	330.00– 380.00	-	-	-	15	-	21	33	19	22	17	5	-	-	-	-	-	-	-	-	-	-
Drafters IV	843	40.0	406.50	400.00	371.50– 439.50	-	-	14	-	10	4	116	111	155	147	167	65	40	14	-	-	-	-	-	-	-
Manufacturing	629	40.0	410.50	402.50	377.50– 445.50	-	-	-	-	10	2	102	72	112	107	125	47	38	14	-	-	-	-	-	-	-
Nonmanufacturing	214	40.0	395.50	398.00	370.00– 420.00	-	-	14	-	-	2	14	39	43	40	42	18	2	-	-	-	-	-	-	-	-
Drafters V	543	40.0	521.00	522.00	469.00– 570.50	-	-	-	-	-	-	-	-	1	18	86	128	90	131	42	33	14	-	-	-	-
Manufacturing	462	40.0	520.50	518.00	467.50– 570.50	-	-	-	-	-	-	-	-	1	18	74	115	73	97	39	31	14	-	-	-	-
Nonmanufacturing	81	40.0	522.00	539.00	469.00– 556.00	-	-	-	-	-	-	-	-	-	-	12	13	17	34	3	2	-	-	-	-	-
Electronics technicians	2,724	40.0	460.50	450.00	384.50– 527.00	-	1	2	1	2	251	217	149	224	191	430	383	279	206	238	128	20	2	-	-	-
Manufacturing	2,492	40.0	447.50	440.00	380.00– 505.50	-	1	-	1	2	251	215	149	220	191	428	381	259	198	112	63	19	2	-	-	-
Nonmanufacturing	232	40.0	600.50	618.00	606.00– 638.00	-	-	2	-	-	-	2	-	4	-	2	2	20	8	126	65	1	-	-	-	-
Electronics technicians II	796	40.0	430.50	421.00	396.00– 455.00	-	-	-	-	-	3	3	63	167	144	238	109	55	14	-	-	-	-	-	-	-
Manufacturing	796	40.0	430.50	421.00	396.00– 455.00	-	-	-	-	-	3	3	63	167	144	238	109	55	14	-	-	-	-	-	-	-
Electronics technicians III	1,072	40.0	525.50	518.00	473.00– 576.50	-	-	-	-	-	-	-	-	3	16	151	269	204	184	154	70	19	2	-	-	-
Manufacturing	1,023	40.0	521.50	513.00	472.00– 568.00	-	-	-	-	-	-	-	-	3	16	151	269	204	184	112	63	19	2	-	-	-
Registered industrial nurses	86	39.5	470.50	459.50	425.50– 498.00	-	-	-	-	-	-	-	-	-	12	31	22	9	10	2	-	-	-	-	-	-

• Workers were distributed as follows: 22 at $200.00 to $220.00, and 24 at $220.00 to $240.00.

• • Workers were distributed as follows: 9 at $200.00 to $220.00, and 16 at $220.00 to $240.00.

Also see footnotes at end of tables.

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Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Minneapolis-St. Paul, MN-WI, January 1985

Sex,* occupation, and industry division	Number of workers	Average (mean[1]) Weekly hours[1] (standard)	Average (mean[1]) Weekly earnings (in dollars)[2]
Office occupations - men			
Order clerks	169	40.0	317.50
Nonmanufacturing	159	40.0	311.00
Order clerks I	85	40.0	263.00
Office occupations - women			
Secretaries	4,771	39.5	333.00
Nonmanufacturing	2,423	39.5	341.00
Transportation and utilities	312	40.0	388.50
Secretaries I			
Nonmanufacturing	124	39.0	308.50
Secretaries II	1,152	39.5	312.00
Manufacturing	618	39.5	313.00
Nonmanufacturing	534	39.5	310.50
Transportation and utilities	105	40.0	377.50
Secretaries III	1,440	39.5	331.00
Nonmanufacturing	885	39.5	334.00
Transportation and utilities	129	40.0	373.50
Secretaries IV			
Nonmanufacturing	597	39.5	349.00
Secretaries V			
Nonmanufacturing	281	40.0	418.00
Stenographers			
Manufacturing	54	38.5	263.50
Stenographers I	91	39.5	371.00
Nonmanufacturing	62	40.0	431.00
Transportation and utilities	62	40.0	431.00
Typists	848	39.5	268.50
Manufacturing	307	39.5	259.50
Nonmanufacturing	541	39.5	273.50
Typists I	640	39.5	261.50
Manufacturing	162	39.0	249.50
Nonmanufacturing	478	39.5	265.50
Typists II	208	39.5	290.50
Manufacturing	145	39.5	271.00
Word processors	672	39.5	298.50
Manufacturing	244	40.0	306.00
Nonmanufacturing	428	39.5	294.00
Word processors I	303	39.5	276.00
Nonmanufacturing	209	39.5	271.50
Word processors II	369	39.5	317.00
Manufacturing	150	40.0	318.50
Nonmanufacturing	219	39.5	315.50
File clerks	664	39.5	204.00
Nonmanufacturing	500	39.5	199.00
File clerks I	341	39.5	191.00
Nonmanufacturing	257	39.5	184.50
File clerks II	294	39.5	214.00
Nonmanufacturing	215	39.5	210.00
Messengers	294	39.5	207.00
Manufacturing	111	39.0	215.50
Nonmanufacturing	183	39.5	201.50
Receptionists	192	39.5	240.50
Manufacturing	82	40.0	236.50
Nonmanufacturing	110	39.5	243.50
Switchboard operators	243	39.5	249.50
Manufacturing	62	39.5	312.50
Nonmanufacturing	181	40.0	228.00
Switchboard operator-receptionists	873	40.0	251.50
Manufacturing	314	39.5	246.50
Nonmanufacturing	559	40.0	254.00
Transportation and utilities	61	39.5	242.50
Order clerks	726	40.0	286.50
Manufacturing	442	40.0	303.00
Nonmanufacturing	284	40.0	260.50
Order clerks I	539	40.0	263.00
Manufacturing	257	40.0	267.00
Nonmanufacturing	282	40.0	259.50
Order clerks II	187	40.0	353.50
Manufacturing	185	40.0	353.00
Accounting clerks	6,521	39.5	282.00
Manufacturing	2,613	39.5	292.50
Accounting clerks I	650	39.5	236.50
Manufacturing	299	39.5	249.00
Nonmanufacturing			
Transportation and utilities	38	40.0	286.00
Accounting clerks II	2,859	39.5	254.50
Manufacturing	925	39.5	263.00
Nonmanufacturing	1,934	39.5	250.00
Transportation and utilities	246	40.0	273.50
Accounting clerks III	2,195	39.5	305.50
Manufacturing	839	39.0	303.50
Nonmanufacturing	1,356	40.0	307.00
Accounting clerks IV			
Manufacturing	550	39.5	348.50
Payroll clerks	666	40.0	306.50
Manufacturing	282	40.0	323.50
Nonmanufacturing	384	40.0	294.50
Transportation and utilities	74	40.0	335.50
Key entry operators	2,102	39.5	269.50
Manufacturing	645	39.0	259.00
Nonmanufacturing	1,457	39.5	274.00
Key entry operators I	1,106	39.5	256.00
Manufacturing	421	39.0	243.00
Nonmanufacturing	685	39.5	264.00
Transportation and utilities	62	39.5	311.00
Key entry operators II	996	39.5	284.50
Nonmanufacturing	772	40.0	283.50
Professional and technical occupations - men			
Computer systems analysts (business)			
Computer systems analysts (business) I			
Manufacturing	78	40.0	484.50
Computer programmers (business)	2,003	39.5	485.50
Manufacturing	781	40.0	542.50
Nonmanufacturing	1,222	39.5	448.50
Computer programmers (business) I	416	39.5	353.50
Manufacturing	141	40.0	382.50
Nonmanufacturing	275	39.5	339.00
Computer programmers (business) II			
Nonmanufacturing	545	40.0	448.00
Computer programmers (business) III	697	39.5	573.00
Manufacturing	295	40.0	639.50
Nonmanufacturing	402	39.5	524.50
Computer operators	944	39.5	338.50
Manufacturing	476	39.5	342.00
Computer operators I	168	39.5	276.50
Manufacturing	113	40.0	286.50
Nonmanufacturing	55	39.0	256.50
Computer operators III	283	39.5	393.50
Manufacturing	117	39.5	393.50
Nonmanufacturing	166	40.0	393.00
Peripheral equipment operators	54	40.0	289.50
Drafters	2,070	40.0	420.00
Manufacturing	1,389	40.0	425.00
Nonmanufacturing	681	40.0	409.00
Drafters II	88	40.0	325.00
Manufacturing	77	40.0	324.00
Drafters III	456	40.0	350.50
Manufacturing	343	40.0	347.50
Nonmanufacturing	113	40.0	358.50
Drafters IV	718	40.0	405.00
Manufacturing	524	40.0	409.50
Nonmanufacturing	194	40.0	393.00

See footnotes at end of tables.

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Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Sex,[1] occupation, and industry division	Number of workers	Average (mean)[2]	
		Weekly hours[3] (standard)	Weekly earnings (in dollars)[4]
Drafters V	518	40.0	521.50
Manufacturing	444	40.0	521.50
Nonmanufacturing	74	40.0	521.50
Electronics technicians	2,470	40.0	465.50
Manufacturing	2,255	40.0	453.00
Nonmanufacturing	215	40.0	586.00
Electronics technicians II	695	40.0	432.50
Manufacturing	695	40.0	432.50
Electronics technicians III	1,040	40.0	526.50
Manufacturing	991	40.0	522.50
Professional and technical occupations - women			
Computer programmers (business)	1,184	39.5	437.50
Manufacturing	457	39.5	474.50
Nonmanufacturing	727	39.5	414.50
Computer programmers (business) I	288	40.0	365.00
Manufacturing	102	40.0	410.00
Nonmanufacturing	186	40.0	340.50
Computer programmers (business) III	348	39.0	496.00
Manufacturing	127	39.0	560.50
Nonmanufacturing	221	39.0	458.50
Computer operators	973	39.5	328.50
Manufacturing	459	39.5	329.00
Computer operators I	209	40.0	298.50
Manufacturing	138	40.0	302.50
Nonmanufacturing	70	39.5	291.00
Computer operators III	167	39.5	368.00
Manufacturing	77	40.0	374.50
Peripheral equipment operators	72	40.0	293.00
Computer data librarians	69	39.5	299.50
Nonmanufacturing	61	39.5	296.50
Electronics technicians	237	40.0	399.00
Manufacturing	237	40.0	399.00
Electronics technicians II	101	40.0	414.00
Manufacturing	101	40.0	414.00
Registered industrial nurses	74	39.5	465.00

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Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight time hourly earnings (in dollars) of —																					
		Mean[1]	Median[1]	Middle range[1]	Under 6.00	6.00 and under 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 15.50	15.50 – 16.00	16.00 – 16.50	16.50 and over
Maintenance carpenters	115	13.96	14.43	12.13–15.86	-	-	-	-	-	-	-	-	-	-	-	1	4	31	7	7	-	33	-	1	24	4	3
Manufacturing	61	13.60	14.43	12.22–14.43	-	-	-	-	-	-	-	-	-	-	-	-	4	13	4	5	-	33	-	1	-	-	1
Nonmanufacturing	54	14.36	15.86	12.13–15.86	-	-	-	-	-	-	-	-	-	-	-	1	-	18	3	2	-	-	-	-	24	4	2
Maintenance electricians	374	14.73	14.95	14.27–15.44	-	-	-	-	-	-	-	1	-	-	29	6	2	7	28	12	7	6	131	54	9	35	* 47
Manufacturing	352	14.61	14.95	13.92–15.44	-	-	-	-	-	-	-	1	-	-	29	6	2	7	28	12	4	4	131	54	9	34	31
Maintenance painters	77	13.03	14.43	11.41–14.47	-	-	5	-	-	-	-	-	8	-	4	3	2	5	2	-	4	26	-	15	1	-	2
Maintenance machinists	398	14.23	14.57	13.46–14.57	-	-	-	-	-	-	-	-	-	-	-	7	1	39	11	55	2	10	224	2	29	18	-
Manufacturing	357	14.09	14.57	13.46–14.57	-	-	-	-	-	-	-	-	-	-	-	7	1	39	11	55	2	-	224	-	-	18	-
Maintenance mechanics (machinery)	1,277	12.00	11.63	10.72–12.97	-	-	-	-	-	14	-	135	8	80	104	163	169	195	115	80	34	1	70	-	75	24	10
Manufacturing	983	11.87	12.17	10.72–12.97	-	-	-	-	-	7	-	125	-	64	60	108	109	195	115	70	32	1	70	-	-	24	-
Nonmanufacturing	294	12.40	11.51	10.63–15.66	-	-	-	-	-	7	-	7	8	16	44	55	60	-	-	10	2	-	-	-	75	-	10
Maintenance pipefitters	95	15.05	14.94	14.94–15.16	-	-	-	-	-	-	-	-	-	1	-	-	-	5	2	1	-	-	51	26	-	-	9
Manufacturing	86	14.73	14.94	14.94–15.16	-	-	-	-	-	-	-	-	-	1	-	-	-	5	2	1	-	-	51	26	-	-	-
Millwrights	154	14.36	14.43	14.43–14.51	-	-	-	-	-	-	-	-	-	-	-	-	2	9	1	1	-	78	44	19	-	-	-
Manufacturing	154	14.36	14.43	14.43–14.51	-	-	-	-	-	-	-	-	-	-	-	-	2	9	1	1	-	78	44	19	-	-	-
Motor vehicle mechanics	847	12.89	13.58	12.00–14.22	-	-	-	-	-	-	-	64	-	88	21	5	22	82	30	75	236	55	146	17	-	6	-
Manufacturing	158	11.69	11.91	9.01–13.69	-	-	-	-	-	-	-	64	-	-	7	5	4	6	-	3	41	12	1	9	-	6	-
Nonmanufacturing	689	13.17	13.58	12.48–14.22	-	-	-	-	-	-	-	-	-	88	14	-	18	76	30	72	195	43	145	8	-	-	-
Transportation and utilities	616	13.14	13.58	12.48–14.22	-	-	-	-	-	-	-	-	-	88	-	-	18	74	26	72	181	32	117	8	-	-	-
Maintenance workers (general)	956	9.23	9.24	7.60–11.00	35	19	90	83	40	74	101	92	63	73	45	127	60	10	1	21	8	14	-	-	-	-	-
Manufacturing	494	9.34	9.35	8.23–10.51	-	-	51	39	9	48	52	60	45	61	43	34	32	-	1	19	-	-	-	-	-	-	-
Nonmanufacturing	462	9.11	8.75	7.25–11.40	35	19	39	44	31	26	49	32	18	12	2	93	28	10	-	2	8	14	-	-	-	-	-
Transportation and utilities	47	9.37	9.97	6.00–10.10	* * 5	9	-	-	-	-	1	-	18	6	-	-	-	-	-	-	-	8	-	-	-	-	-
Maintenance trades helpers	58	10.68	10.79	8.75–11.84	-	-	-	1	-	1	14	-	12	1	-	5	18	-	-	-	-	6	-	-	-	-	-
Machine-tool operators (toolroom)	173	10.86	10.99	10.99–11.00	-	-	-	-	-	-	-	-	30	-	96	28	2	12	-	5	-	-	-	-	-	-	-
Manufacturing	173	10.86	10.99	10.99–11.00	-	-	-	-	-	-	-	-	30	-	96	28	2	12	-	5	-	-	-	-	-	-	-
Tool and die makers	1,181	13.60	14.00	13.00–14.90	-	-	-	-	-	-	-	-	-	16	84	76	29	56	22	159	122	250	73	275	18	1	-
Manufacturing	1,181	13.60	14.00	13.00–14.90	-	-	-	-	-	-	-	-	-	16	84	76	29	56	22	159	122	250	73	275	18	1	-
Stationary engineers	329	12.64	12.73	11.53–14.01	-	-	-	-	-	-	-	1	22	2	37	1	42	31	75	29	6	59	5	7	-	-	12
Manufacturing	133	12.97	13.32	12.39–14.15	-	-	-	-	-	-	-	1	15	-	-	-	12	17	17	9	6	49	-	7	-	-	-
Nonmanufacturing	196	12.41	12.55	11.53–12.95	-	-	-	-	-	-	-	-	7	2	37	1	30	14	58	20	-	10	5	-	-	-	12
Transportation and utilities	28	14.94	14.81	12.95–16.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	5	-	-	-	# 12

* Workers were distributed as follows: 24 at $16.50 to $17.00; 6 at $17.50 to $18.00; 2 at $18.00 to $18.50; and 15 at $18.50 to $19.00.

* * All workers were at $4.50 to $5.00.

All workers were at $16.50 to $17.00.

Also see footnotes at end of tables.

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Table A-5. Hourly earnings of material movement and custodial workers in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean[1]	Median[1]	Middle range[1]	3.35 and under 3.50	3.50 – 4.00	4.00 – 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 and over
Truckdrivers	4,559	12.64	13.21	12.69–14.04	–	–	–	51	50	25	121	44	7	6	–	18	43	46	49	282	103	89	107	836	1245	1186	144
Manufacturing	1,343	12.92	13.30	12.36–13.69	–	–	–	–	–	–	–	7	7	1	–	18	20	30	45	136	50	17	33	11	601	23	* 144
Nonmanufacturing	3,216	12.52	13.21	12.69–14.04	–	–	–	51	50	25	121	37	–	5	–	–	20	16	4	146	53	72	74	925	644	1173	–
Transportation and utilities	1,616	13.29	13.21	12.74–14.14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	1	715	404	486	–
Truckdrivers, light truck	453	10.26	7.51	6.37–16.01	–	–	–	–	19	25	91	37	7	5	–	2	17	7	–	4	20	–	4	–	1	–	* * 124
Nonmanufacturing	165	6.53	6.37	6.34– 6.95	–	–	–	–	19	25	91	37	–	5	–	–	–	–	–	–	6	–	–	–	–	–	–
Truckdrivers, medium truck	1,072	12.16	13.47	10.72–14.14	–	–	–	51	30	–	30	7	–	1	–	16	1	23	17	124	19	64	42	56	125	446	20
Manufacturing	235	10.91	10.72	10.25–10.80	–	–	–	–	–	–	–	7	–	1	–	16	1	23	17	124	19	–	–	–	7	–	20
Nonmanufacturing	837	12.51	14.14	12.33–14.14	–	–	–	51	30	–	30	–	–	–	–	–	–	–	–	–	–	64	42	56	118	446	–
Truckdrivers, heavy truck	931	12.85	13.15	12.69–13.69	–	–	–	–	–	–	–	–	–	–	–	–	20	–	4	132	15	6	24	165	356	203	–
Manufacturing	395	13.42	13.69	13.15–13.69	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	24	11	356	–	–
Nonmanufacturing	536	12.62	12.69	10.83–14.24	–	–	–	–	–	–	–	–	–	–	–	–	20	–	4	132	15	6	–	154	–	203	–
Truckdrivers, tractor-trailer	1,408	13.43	13.30	13.21–14.04	–	–	–	–	–	–	–	–	–	–	–	–	–	16	–	22	49	1	17	–	756	547	–
Nonmanufacturing	926	13.52	14.04	13.21–14.04	–	–	–	–	–	–	–	–	–	–	–	–	–	16	–	14	30	–	16	–	326	524	–
Transportation and utilities	370	13.31	13.21	13.21–13.21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	–	326	40	–
Shippers	501	9.42	9.65	8.07–10.06	–	–	–	–	–	–	–	18	36	34	107	71	39	53	20	20	27	22	2	–	54	16	–
Manufacturing	294	9.28	9.53	8.07– 9.38	–	–	–	–	–	–	–	–	–	34	107	50	36	1	–	1	12	21	–	–	32	–	–
Nonmanufacturing	207	9.60	9.80	7.20–10.63	–	–	–	–	–	–	–	18	36	–	–	21	3	52	20	19	15	1	2	–	2	16	–
Receivers	410	9.66	9.68	7.46–11.86	–	–	–	2	18	36	4	–	51	29	7	16	29	28	23	20	25	21	21	14	38	28	–
Manufacturing	165	10.06	9.68	7.65–11.86	–	–	–	–	–	–	2	–	16	29	5	16	7	17	3	5	10	17	–	–	38	–	–
Nonmanufacturing	245	9.39	9.60	7.00–12.14	–	–	–	2	18	36	2	–	35	1	2	–	22	11	20	14	15	4	21	14	–	28	–
Shippers and receivers	520	9.35	9.68	8.25–11.86	–	–	–	29	41	65	29	39	14	1	19	64	48	–	57	6	18	24	86	–	17	35	–
Manufacturing	442	9.04	9.68	8.50–11.86	–	–	–	29	16	32	29	32	14	1	14	62	23	–	49	6	3	24	86	–	14	–	–
Nonmanufacturing	178	8.75	8.13	7.65–11.13	–	–	–	–	25	53	–	7	–	–	5	2	25	–	8	–	15	–	–	–	3	35	–
Warehousemen	2,304	11.45	11.60	9.62–14.03	–	–	–	–	1	60	2	21	79	56	150	107	73	160	41	166	72	172	35	193	249	604	–
Manufacturing	535	10.72	10.51	9.97–13.64	–	–	–	–	–	–	–	–	12	–	32	88	67	–	39	104	–	42	–	1	140	–	–
Nonmanufacturing	1,769	11.67	12.14	9.91–14.24	–	–	–	–	1	60	2	21	67	56	118	19	6	160	2	64	72	130	35	192	109	604	–
Order fillers	1,449	10.14	10.53	8.50–10.92	–	–	64	33	–	10	46	89	10	14	48	141	6	134	35	459	–	35	–	73	4	248	–
Manufacturing	452	9.36	9.79	8.50–10.31	–	–	–	–	–	–	–	64	–	–	–	137	–	115	31	67	–	35	–	–	–	–	–
Nonmanufacturing	997	10.50	10.63	8.34–13.04	–	–	64	33	–	10	46	25	10	14	48	4	6	19	4	392	–	–	–	73	4	248	–
Shipping packers	1,025	7.47	8.06	6.70– 8.41	–	30	59	71	35	30	29	26	53	172	283	6	100	61	24	–	–	14	–	–	–	–	–
Manufacturing	679	7.89	7.95	7.08– 9.26	–	–	29	29	14	30	29	7	32	172	112	6	100	61	24	–	–	14	–	–	–	–	–
Material handling laborers	1,677	10.24	10.58	8.52–13.21	–	–	–	93	46	50	3	43	36	55	48	154	111	50	112	300	19	6	4	2	520	–	25
Manufacturing	942	9.23	9.44	8.50–10.58	–	–	–	58	17	46	1	1	35	41	19	153	110	48	64	300	17	–	–	–	6	–	25
Nonmanufacturing	735	11.52	13.21	10.37–13.21	–	–	–	35	29	4	2	42	–	14	29	1	1	2	48	–	2	6	4	2	514	–	–
Forklift operators	1,638	11.41	12.09	10.16–12.22	–	–	–	–	1	–	–	–	22	48	228	49	19	15	155	155	–	121	616	1	150	258	–
Manufacturing	1,060	10.95	10.71	8.84–13.11	–	–	–	–	–	–	–	–	–	42	208	49	19	15	155	141	–	121	65	1	78	196	–
Power truck operators (other than forklift)	120	11.36	11.15	10.08–12.92	–	–	–	–	–	–	–	–	–	–	–	–	23	–	5	28	18	4	–	12	27	–	–
Manufacturing	88	11.58	11.46	9.06–13.69	–	–	–	–	–	–	–	–	–	–	–	–	23	–	5	–	18	–	–	12	27	–	–
Guards	2,550	5.89	4.60	4.00– 7.82	293	328	450	363	197	110	51	30	69	66	54	52	73	145	119	1	–	82	–	26	41	–	–
Manufacturing	448	10.01	10.31	8.79–10.34	–	–	–	–	–	16	4	10	21	3	19	4	11	135	119	1	–	81	–	12	12	–	–
Nonmanufacturing	2,102	5.01	4.40	3.75– 5.25	293	328	450	363	197	94	47	20	48	63	35	48	62	10	–	–	–	1	–	14	29	–	–
Transportation and utilities	52	11.85	13.22	12.62–13.22	–	–	–	–	4	–	4	–	–	–	–	–	–	–	–	–	–	1	–	14	29	–	–

See footnotes at end of tables.

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Table A-5. Hourly earnings of material movement and custodial workers in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																				
		Mean[1]	Median[1]	Middle range[2]	3.35 and under 3.50	3.50 – 4.00	4.00 – 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 and over
Guards I	1,888	5.81	4.55	4.01- 6.49	219	201	380	309	166	101	40	22	31	11	19	4	11	135	119	1	-	52	-	26	41	-	-
Manufacturing	418	9.87	9.79	9.79-10.34	-	-	-	-	-	18	4	10	21	3	19	4	11	135	119	1	-	51	-	12	12	-	-
Nonmanufacturing	1,470	4.66	4.25	3.78- 4.92	219	201	380	309	166	85	36	12	10	8	-	-	-	-	-	-	-	1	-	14	29	-	-
Transportation and utilities	52	11.85	13.22	12.62-13.22	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	1	-	14	29	-	-
Guards II	232	8.51	8.29	7.54- 9.10	-	-	-	7	9	-	-	8	32	54	12	44	26	10	-	-	-	30	-	-	-	-	-
Nonmanufacturing	202	8.00	7.82	7.49- 8.92	-	-	-	7	9	-	-	8	32	54	12	44	26	10	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	6,892	6.26	5.54	4.87- 7.30	-	10	113	1916	1402	795	404	185	427	253	277	166	403	62	140	208	19	70	23	18	1	-	-
Manufacturing	1,496	8.71	8.94	7.69- 9.26	-	-	-	2	39	35	47	39	116	142	222	121	394	57	108	124	17	14	-	18	1	-	-
Nonmanufacturing	5,396	5.58	5.00	4.73- 5.78	-	10	113	1914	1363	760	357	146	311	111	55	45	9	5	32	84	2	56	23	-	-	-	-
Transportation and utilities	249	10.31	10.70	10.29-11.53	-	10	-	-	-	-	-	-	1	19	5	13	4	-	32	84	2	56	23	-	-	-	-

• All workers were at $16.00 to $17.00.

• • All workers were at $16.00 to $17.00.

Also see footnotes at end of tables.

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Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Minneapolis-St. Paul, MN-WI, January 1985

Sex,[4] occupation, and industry division	Number of workers	Average (mean[3]) hourly earnings (in dollars)[3]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	110	14.03
Manufacturing	61	13.60
Maintenance electricians	373	14.74
Manufacturing	352	14.61
Maintenance painters	76	13.04
Maintenance machinists	398	14.23
Manufacturing	357	14.09
Maintenance mechanics (machinery)	1,275	11.99
Manufacturing	983	11.87
Nonmanufacturing	292	12.39
Maintenance pipefitters	95	15.05
Manufacturing	86	14.73
Millwrights	154	14.36
Manufacturing	154	14.36
Motor vehicle mechanics	815	12.84
Manufacturing	158	11.69
Nonmanufacturing	657	13.12
Transportation and utilities	584	13.08
Maintenance workers (general)	940	9.26
Manufacturing	490	9.35
Nonmanufacturing	450	9.17
Transportation and utilities	47	9.37
Maintenance trades helpers	51	10.55
Machine-tool operators (toolroom)	173	10.86
Manufacturing	173	10.86
Tool and die makers	1,181	13.60
Manufacturing	1,181	13.60
Stationary engineers	325	12.64
Manufacturing	133	12.97
Nonmanufacturing	192	12.41
Material movement and custodial occupations - men		
Truckdrivers	3,998	12.47
Manufacturing	1,343	12.92
Truckdrivers, light truck	345	10.44
Nonmanufacturing	167	6.48
Truckdrivers, medium truck		
Manufacturing	235	10.91
Truckdrivers, heavy truck	931	12.96
Manufacturing	395	13.42
Nonmanufacturing	536	12.62
Truckdrivers, tractor-trailer	1,368	13.40
Nonmanufacturing	886	13.49
Transportation and utilities	330	13.20
Shippers	426	9.67
Manufacturing	267	9.41
Nonmanufacturing	159	10.12
Receivers	369	9.71
Manufacturing	128	10.31
Nonmanufacturing	241	9.39
Shippers and receivers	575	9.07
Manufacturing	397	9.22
Nonmanufacturing	178	8.75
Warehousemen	2,019	11.87
Manufacturing	385	11.49
Nonmanufacturing	1,634	11.95
Order fillers	1,170	10.73
Manufacturing	297	9.75
Nonmanufacturing	873	11.07
Shipping packers	420	8.03
Manufacturing	188	8.91
Material handling laborers	1,610	10.32
Manufacturing	890	9.27
Nonmanufacturing	720	11.61
Forklift operators	1,812	11.42
Manufacturing	1,066	10.96
Power-truck operators (other than forklift)	120	11.36
Manufacturing	88	11.58
Guards	2,143	5.83
Manufacturing	342	9.71
Nonmanufacturing	1,801	4.86
Guards I	1,578	5.51
Nonmanufacturing	1,266	4.52
Guards II	184	8.64
Nonmanufacturing	154	8.00
Janitors, porters, and cleaners	4,902	6.23
Manufacturing	1,167	8.50
Nonmanufacturing	3,735	5.53
Material movement and custodial occupations - women		
Shippers	63	7.57
Warehousemen	252	7.96
Order fillers	279	7.67
Manufacturing	155	8.61
Shipping packers	605	7.07
Manufacturing	491	7.50
Guards		
Nonmanufacturing	272	5.11
Guards I		
Nonmanufacturing	175	4.21
Janitors, porters, and cleaners		
Nonmanufacturing	1,478	5.15

Table A-7. Indexes of earnings and percent increases for selected occupational groups, Minneapolis-St. Paul, MN-WI, selected periods

Period[1]	All industries					Manufacturing					Nonmanufacturing			
	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Unskilled plant
Indexes (January 1977 = 100)														
January 1984	178.0	173.3	186.2	175.2	170.0	175.8	172.5	184.8	174.8	181.8	179.2	174.3	(*)	165.1
January 1985	186.9	182.8	198.9	181.7	175.8	185.8	183.7	200.5	182.5	189.8	187.3	182.5	(*)	169.9
Percent increases														
January 1972 to January 1973	5.1	(*)	5.9	6.8	6.8	4.2	(*)	5.4	6.4	6.3	5.5	(*)	(*)	7.1
January 1973 to January 1974	6.2	(*)	5.6	6.4	6.1	5.4	(*)	6.4	6.1	6.6	6.7	(*)	(*)	5.8
January 1974 to January 1975	8.6	8.4	7.8	9.2	9.3	7.7	6.9	6.5	9.0	9.3	9.0	10.2	(*)	9.2
January 1975 to January 1976	7.7	6.5	9.9	8.1	7.7	7.9	5.0	9.8	8.9	10.1	7.6	7.8	(*)	6.7
January 1976 to January 1977	7.9	5.5	8.2	8.7	8.9	8.1	5.8	9.0	8.8	8.3	7.7	5.0	(*)	9.2
January 1977 to January 1978	8.0	7.3	6.8	8.2	8.1	7.1	6.5	6.3	8.1	9.5	8.4	8.1	(*)	7.5
January 1978 to January 1979	8.6	8.5	7.6	8.3	8.1	8.7	8.5	7.5	8.5	8.7	8.5	8.4	(*)	7.9
January 1979 to January 1980	9.1	9.7	10.3	10.4	10.8	8.0	8.6	10.2	9.7	9.9	9.8	10.7	(*)	11.1
January 1980 to January 1981	11.6	10.0	14.7	11.7	11.1	11.6	10.5	15.1	11.4	11.1	11.6	9.6	(*)	11.1
January 1981 to Januray 1982	9.2	8.9	12.5	9.7	8.0	9.2	9.7	12.6	9.8	10.5	9.2	8.3	(*)	6.9
January 1982 to January 1983	7.8	6.9	6.7	5.7	5.9	8.0	7.0	6.2	5.8	7.2	7.7	6.9	(*)	5.3
January 1983 to January 1984	5.9	5.9	6.7	4.6	3.3	6.2	5.9	6.6	4.9	5.6	5.7	5.9	(*)	2.4
January 1984 to January 1985	5.0	5.5	6.8	3.7	3.4	5.7	6.5	8.5	4.4	4.4	4.5	4.7	(*)	2.9

See footnotes at end of tables.

Table A-8. Pay relationships in establishments with paired office clerical occupations, Minneapolis-St. Paul, MN-WI, January 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100																							
	Secretaries				Stenographers	Typists		Word Processors		File clerks		Messengers	Receptionists	Switchboard operators	Switchboard operator-receptionists	Order clerks		Accounting clerks				Payroll clerks	Key entry operators	
	II	III	IV	V	I	I	II	I	II	I	II					I	II	I	II	III	IV		I	II
Secretaries II	**100**	86	76	65	119	124	(*)	114	103	144	130	143	(*)	105	108	121	95	127	114	101	86	101	112	102
Secretaries III	116	**100**	85	75	(*)	140	116	115	100	174	150	150	127	121	127	111	91	131	122	105	97	104	128	113
Secretaries IV	131	117	**100**	85	128	150	138	120	112	195	169	160	145	146	141	138	107	147	136	119	114	121	145	126
Secretaries V	153	133	118	**100**	(*)	(*)	(*)	147	126	223	196	181	169	159	164	144	107	181	161	135	126	137	168	143
Stenographers I	84	(*)	78	(*)	**100**	(*)	(*)	88	(*)	(*)	(*)	106	(*)	98	(*)	(*)	(*)	(*)	105	93	91	89	97	93
Typists I	81	71	67	(*)	(*)	**100**	81	82	70	119	107	109	(*)	86	95	(*)	(*)	107	86	86	78	75	96	81
Typists II	(*)	86	73	(*)	(*)	124	**100**	97	82	(*)	122	111	90	91	101	102	73	105	99	86	83	90	96	93
Word processors I	87	87	83	68	113	121	103	**100**	85	131	122	136	108	104	101	96	(*)	115	112	98	77	90	113	102
Word processors II	97	100	89	79	(*)	143	122	118	**100**	148	133	143	123	114	122	108	93	129	117	104	91	96	122	109
File clerks I	69	57	51	45	(*)	84	(*)	76	68	**100**	89	92	(*)	69	81	(*)	(*)	87	72	66	58	65	75	71
File clerks II	77	67	59	51	(*)	93	82	82	75	112	**100**	99	76	90	94	94	(*)	88	82	69	81	78	86	80
Messengers	70	67	62	55	94	91	90	73	70	108	101	**100**	81	80	86	88	(*)	87	85	72	78	74	85	76
Receptionists	(*)	79	69	59	(*)	(*)	111	93	81	(*)	132	124	**100**	97	97	83	80	115	94	84	78	81	97	98
Switchboard operators	96	83	69	63	102	116	110	96	88	145	111	126	103	**100**	96	89	80	124	105	94	84	87	104	92
Switchboard operator-receptionists	92	79	71	61	(*)	106	99	99	82	123	107	116	103	105	**100**	103	92	111	96	88	78	81	101	86
Order clerks I	83	90	73	69	(*)	(*)	98	104	92	(*)	106	114	121	112	97	**100**	90	(*)	103	85	85	90	96	90
Order clerks II	106	109	93	94	(*)	(*)	137	(*)	107	(*)	(*)	(*)	125	126	109	112	**100**	(*)	126	104	109	106	132	115
Accounting clerks I	79	76	68	55	(*)	94	96	87	77	114	114	115	87	81	90	(*)	(*)	**100**	87	78	66	80	92	77
Accounting clerks II	88	82	74	62	95	117	101	89	86	139	123	118	106	95	105	97	80	115	**100**	84	76	88	99	91
Accounting clerks III	99	95	84	74	108	117	117	102	96	150	145	139	118	107	114	117	96	129	119	**100**	86	101	112	101
Accounting clerks IV	116	103	88	79	110	129	120	130	110	173	124	128	128	119	127	118	91	151	131	116	**100**	111	123	114
Payroll clerks	99	96	83	73	113	133	111	111	104	154	128	135	124	115	123	112	95	125	113	99	90	**100**	113	103
Key entry operators I	90	78	69	59	103	104	104	98	82	133	117	118	103	96	99	104	76	109	101	89	81	89	**100**	83
Key entry operators II	98	89	79	70	108	123	108	98	91	140	125	131	102	109	116	111	87	129	110	99	88	97	120	**100**

NOTE: This matrix table shows the average (mean) relationship of earnings in establishments between any two occupations compared. Earnings for an occupation in the table stub are expressed as a percent of the earnings for an occupation in the column heading at the point where the data lines for the two intersect. For example, reading across the Secretaries III row, the 116 in the Secretaries II column indicates that Secretaries III average 116 percent of (or 16 percent more than) the earnings of Secretaries II.

See appendix A for method of computation.

Also see footnotes at end of tables.

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Table A-9. Pay relationships in establishments with paired professional and technical occupations, Minneapolis-St. Paul, MN-WI, January 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100																	
	Computer systems analysts (business)			Computer programmers (business)			Computer operators			Peripheral equipment operators	Computer data librarians	Drafters				Electronics technicians		Registered industrial nurses
	I	II	III	I	II	III	I	II	III			II	III	IV	V	II	III	
Computer systems analysts (business) I	**100**	87	74	118	104	84	174	145	120	170	149	151	135	114	94	125	102	100
Computer systems analysts (business) II	116	**100**	85	145	126	104	198	171	143	206	184	179	166	140	114	146	118	121
Computer systems analysts (business) III	136	118	**100**	179	143	128	232	198	170	245	222	211	194	164	131	168	137	140
Computer programmers (business) I	84	69	56	**100**	82	69	14[illegible]	118	94	(*)	134	132	109	97	76	111	93	81
Computer programmers (business) II	96	80	70	122	**100**	82	17	140	109	167	149	160	134	112	91	128	106	102
Computer programmers (business) III	119	97	78	144	122	**100**	205	169	134	200	189	188	164	135	108	150	125	121
Computer operators I	58	50	43	67	57	49	**100**	84	68	(*)	107	83	79	63	51	70	57	60
Computer operators II	69	58	51	85	71	59	119	**100**	82	121	116	109	95	82	64	84	69	74
Computer operators III	83	70	59	106	91	75	148	122	**100**	155	127	138	113	95	75	(*)	(*)	84
Peripheral equipment operators	59	48	41	(*)	60	50	(*)	83	64	**100**	99	(*)	(*)	(*)	56	(*)	(*)	58
Computer data librarians	67	54	45	75	67	53	93	86	79	101	**100**	96	81	68	69	(*)	(*)	68
Drafters II	66	56	47	76	63	53	120	92	73	(*)	104	**100**	89	76	61	85	69	68
Drafters III	74	60	52	91	75	61	127	105	89	(*)	123	113	**100**	84	67	92	76	73
Drafters IV	87	72	61	103	89	74	158	122	106	(*)	147	131	119	**100**	80	110	88	86
Drafters V	106	87	76	131	110	92	197	156	133	179	144	163	149	125	**100**	135	112	108
Electronics technicians II	80	69	60	90	78	67	143	119	(*)	(*)	(*)	118	109	91	74	**100**	82	(*)
Electronics technicians III	98	85	73	107	95	80	175	145	(*)	(*)	(*)	144	131	113	89	122	**100**	(*)
Registered industrial nurses	100	83	72	124	98	83	167	135	119	173	147	148	137	116	93	(*)	(*)	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

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Table A-10. Pay relationships in establishments with paired maintenance, toolroom, and powerplant occupations, Minneapolis-St. Paul, MN-WI, January 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100												
	Carpenters	Electricians	Painters	Machinists	Maintenance mechanics (machinery)	Pipefitters	Millwrights	Motor vehicle mechanics	Maintenance workers (general)	Trades helpers	Machine-tool operators (toolroom)	Tool and die makers	Stationary engineers
Maintenance carpenters	**100**	94	103	100	98	94	(*)	110	(*)	109	98	(*)	109
Maintenance electricians	107	**100**	106	107	113	101	103	112	140	(*)	(*)	98	115
Maintenance painters	97	94	**100**	(*)	95	94	99	106	109	112	94	(*)	100
Maintenance machinists	100	94	(*)	**100**	102	(*)	102	104	114	(*)	(*)	95	105
Maintenance mechanics (machinery)	102	89	105	98	**100**	99	(*)	102	123	115	96	87	103
Maintenance pipefitters	107	99	106	(*)	101	**100**	(*)	108	(*)	(*)	(*)	97	108
Millwrights	(*)	98	101	98	(*)	(*)	**100**	(*)	(*)	(*)	(*)	(*)	(*)
Motor vehicle mechanics	91	90	95	96	99	93	(*)	**100**	136	(*)	(*)	(*)	100
Maintenance workers (general)	(*)	71	91	87	81	(*)	(*)	73	**100**	(*)	(*)	73	90
Maintenance trades helpers	92	(*)	89	(*)	87	(*)	(*)	(*)	(*)	**100**	(*)	(*)	84
Machine-tool operators (toolroom)	103	(*)	107	(*)	104	(*)	(*)	(*)	(*)	(*)	**100**	90	97
Tool and die makers	(*)	102	(*)	105	115	103	(*)	(*)	138	(*)	111	**100**	104
Stationary engineers	92	87	100	95	97	92	(*)	100	111	120	103	96	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-11. Pay relationships in establishments with paired material movement and custodial occupations, Minneapolis-St. Paul, MN-WI, January 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100														
	Truckdrivers				Shippers	Receivers	Shippers and receivers	Warehouse-men	Order fillers	Shipping packers	Material handling laborers	Forklift operators	Power-truck operators (other than forklift)	Guards		Janitors, porters, and cleaners
	Light truck	Medium truck	Heavy truck	Tractor-trailer										I	II	
Truckdrivers, light truck	**100**	(*)	(*)	(*)	86	95	(*)	(*)	(*)	(*)	108	(*)	(*)	70	(*)	141
Truckdrivers, medium truck	(*)	**100**	(*)	(*)	107	103	(*)	112	(*)	113	109	103	(*)	152	(*)	148
Truckdrivers, heavy truck	(*)	(*)	**100**	99	(*)	100	(*)	103	(*)	(*)	(*)	98	(*)	(*)	(*)	(*)
Truckdrivers, tractor-trailer	(*)	(*)	101	**100**	100	100	(*)	100	(*)	(*)	103	98	(*)	151	(*)	127
Shippers	116	93	(*)	100	**100**	99	(*)	100	112	115	107	103	101	123	(*)	122
Receivers	105	97	100	100	101	**100**	(*)	102	110	122	104	97	102	113	(*)	122
Shippers and receivers	(*)	(*)	(*)	(*)	(*)	(*)	**100**	101	104	117	113	102	(*)	(*)	(*)	123
Warehousemen	(*)	89	97	100	100	98	99	**100**	100	106	(*)	103	(*)	118	(*)	143
Order fillers	(*)	(*)	(*)	(*)	89	91	96	100	**100**	98	96	96	(*)	105	(*)	110
Shipping packers	(*)	88	(*)	(*)	87	82	85	94	102	**100**	(*)	90	(*)	92	(*)	103
Material handling laborers	93	91	(*)	97	94	96	88	(*)	104	(*)	**100**	99	100	(*)	(*)	111
Forklift operators	(*)	97	103	102	97	103	98	97	104	112	101	**100**	100	120	(*)	116
Power-truck operators (other than forklift)	(*)	(*)	(*)	(*)	99	98	(*)	(*)	(*)	(*)	100	100	**100**	(*)	(*)	105
Guards I	144	66	(*)	66	82	88	(*)	85	96	108	(*)	83	(*)	**100**	(*)	107
Guards II	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	**100**	112
Janitors, porters, and cleaners	71	67	(*)	79	82	82	82	70	91	97	90	86	95	94	90	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

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Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Average weekly hours (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[1]	Median[1]	Middle range[1]	160 and under 180	180 - 200	200 - 220	220 - 240	240 - 260	260 - 280	280 - 300	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 420	420 - 440	440 - 460	460 - 480	480 - 500	500 - 540	540 - 580	580 - 620	620 - 660
Secretaries	3,930	39.5	344.00	336.00	298.00- 381.50	–	–	9	24	185	369	418	575	505	383	444	309	256	143	125	72	52	29	28	2	2
Manufacturing	2,535	39.5	339.00	331.00	295.00- 376.50	–	–	2	17	121	263	300	402	330	252	255	203	106	96	85	57	36	9	–	–	1
Nonmanufacturing	1,395	39.5	353.00	346.00	304.00- 394.50	–	–	7	7	64	106	118	173	175	131	189	106	150	47	40	15	16	20	28	2	1
Transportation and utilities	251	40.0	413.00	415.50	367.00- 455.00	–	–	–	–	–	11	–	5	13	19	29	26	55	23	21	8	11	14	13	2	1
Secretaries II	768	39.5	323.50	323.00	293.50- 357.50	–	–	8	13	56	65	78	144	115	107	117	22	22	6	15	–	–	–	–	–	–
Manufacturing	441	39.5	321.00	319.50	294.50- 349.50	–	–	1	8	20	37	64	93	69	66	62	14	6	–	1	–	–	–	–	–	–
Nonmanufacturing	327	39.5	327.00	329.50	281.50- 361.00	–	–	7	5	36	28	14	51	46	11	55	8	16	6	14	–	–	–	–	–	–
Secretaries III	1,130	39.5	333.50	328.00	302.00- 360.00	–	–	–	2	27	76	132	238	243	127	96	67	92	22	5	1	–	2	–	–	–
Manufacturing	569	40.0	327.00	324.00	303.00- 345.00	–	–	–	–	4	35	62	155	151	74	45	26	2	11	2	–	–	2	–	–	–
Nonmanufacturing	561	39.5	340.50	334.00	300.00- 384.50	–	–	–	2	23	41	70	83	92	53	51	41	90	11	3	1	–	–	–	–	–
Secretaries IV	860	40.0	371.50	371.00	339.00- 398.00	–	–	–	–	5	36	33	65	79	116	169	152	90	39	21	11	23	9	12	–	–
Nonmanufacturing	304	39.5	362.50	351.00	302.50- 413.50	–	–	–	–	5	36	31	37	28	27	34	20	24	16	7	7	11	9	12	–	–
Transportation and utilities	35	40.0	474.00	471.50	438.50- 508.00	–	–	–	–	–	–	–	–	–	–	1	2	4	3	3	5	7	3	7	–	–
Secretaries V	458	40.0	432.50	434.00	396.00- 462.00	–	–	–	–	–	–	–	6	11	12	44	53	49	75	83	60	29	16	16	2	2
Nonmanufacturing	176	40.0	421.50	402.00	370.00- 451.00	–	–	–	–	–	–	–	2	7	7	38	34	20	13	15	7	5	9	16	2	1
Transportation and utilities	47	40.0	467.00	461.50	392.50- 525.00	–	–	–	–	–	–	–	–	–	–	–	14	3	5	1	2	4	9	6	2	1
Stenographers	126	39.5	375.00	384.00	264.50- 485.00	–	5	6	7	13	10	6	4	3	7	–	4	1	20	–	7	16	7	–	10	–
Nonmanufacturing	80	40.0	449.00	444.50	408.00- 497.00	–	–	–	–	3	–	1	1	3	7	–	4	1	20	–	7	16	7	–	10	–
Transportation and utilities	80	40.0	449.00	444.50	408.00- 497.00	–	–	–	–	3	–	1	1	3	7	–	4	1	20	–	7	16	7	–	10	–
Stenographers I	44	39.5	377.50	384.00	266.50- 471.50	–	4	5	5	8	7	2	3	3	7	–	4	–	20	–	7	9	–	–	10	–
Nonmanufacturing	65	40.0	438.00	421.00	384.00- 486.50	–	–	–	–	3	–	1	1	3	7	–	4	–	20	–	7	9	–	–	10	–
Transportation and utilities	65	40.0	438.00	421.00	384.00- 486.50	–	–	–	–	3	–	1	1	3	7	–	4	–	20	–	7	9	–	–	10	–
Typists	459	39.5	300.00	293.00	234.00- 318.00	10	8	19	78	49	32	61	80	7	3	10	2	26	57	–	–	4	3	–	–	–
Manufacturing	166	39.5	265.00	262.00	240.00- 293.00	–	7	10	23	40	19	49	12	1	3	–	2	–	–	–	–	–	–	–	–	–
Nonmanufacturing	293	40.0	319.50	318.00	238.50- 402.50	10	1	9	55	9	13	12	68	6	–	10	–	26	57	–	–	4	3	–	–	–
Typists I	307	39.5	293.50	293.00	236.00- 318.00	10	7	14	59	13	16	52	71	–	–	–	–	6	57	–	–	2	–	–	–	–
Manufacturing	80	39.5	265.50	293.00	240.00- 293.00	–	7	7	5	10	8	40	3	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	227	40.0	311.00	300.50	232.50- 422.50	10	–	7	54	3	8	12	68	–	–	–	–	6	57	–	–	2	–	–	–	–
Typists II	152	39.5	301.00	276.50	245.50- 347.50	–	1	5	19	36	16	9	19	7	3	10	2	20	–	–	–	2	3	–	–	–
Manufacturing	86	39.5	264.50	254.50	240.00- 281.00	–	–	3	18	30	11	9	9	1	3	–	2	–	–	–	–	–	–	–	–	–
Word processors	340	39.5	314.50	311.00	287.00- 340.00	–	–	7	13	24	49	61	106	70	48	24	15	16	5	1	1	–	–	–	–	–
Manufacturing	217	40.0	316.50	310.00	289.50- 339.50	–	–	–	2	9	31	41	69	35	25	14	11	5	5	–	–	–	–	–	–	–
Nonmanufacturing	123	39.0	312.00	314.50	277.50- 347.00	–	–	7	11	15	18	20	37	35	23	10	4	11	–	1	1	–	–	–	–	–
Word processors I	167	39.5	292.00	300.50	277.00- 314.00	–	–	7	9	10	22	32	58	20	9	–	–	–	–	–	–	–	–	–	–	–
Manufacturing	84	40.0	296.50	301.00	277.00- 310.00	–	–	–	1	5	18	15	29	10	6	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	83	39.0	288.00	300.00	272.00- 314.50	–	–	7	8	5	4	17	29	10	3	–	–	–	–	–	–	–	–	–	–	–
Word processors II	173	39.5	328.50	323.50	296.50- 356.50	–	–	–	4	14	27	29	48	50	39	24	15	16	5	1	1	–	–	–	–	–
Manufacturing	163	40.0	327.00	318.50	297.50- 355.00	–	–	–	1	4	13	26	40	25	19	14	11	5	5	–	–	–	–	–	–	–
Nonmanufacturing	110	39.0	330.00	330.50	282.50- 357.00	–	–	–	3	10	14	3	8	25	20	10	4	11	–	1	1	–	–	–	–	–
File clerks	166	39.0	224.50	206.00	180.50- 236.50	30	53	33	26	10	10	13	3	–	–	–	–	–	–	1	2	1	4	–	–	–
Nonmanufacturing	165	39.0	223.50	203.00	186.00- 231.00	30	47	28	26	5	10	10	1	–	–	–	–	–	–	1	2	1	4	–	–	–
File clerks I	86	39.0	210.00	213.00	189.50- 226.50	16	14	25	21	–	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	83	39.0	210.50	213.00	188.50- 226.50	16	12	24	21	–	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
File clerks II	80	39.0	205.00	193.00	183.00- 204.50	14	31	4	4	4	–	–	1	–	–	–	–	–	–	–	2	–	–	–	–	–

See footnotes at end of tables.

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Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																		
			Mean[1]	Median[1]	Middle range[1]	160 and under 180	180 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 500	500 – 540	540 – 580	580 – 620	620 – 660
Messengers	285	39.0	215.50	202.00	188.50- 222.50	50	88	72	40	11	5	6	3	1	-	-	-	1	-	1	1	3	1	2	-	-
Manufacturing	105	39.0	212.50	212.00	193.00- 219.50	7	26	46	14	5	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	180	39.5	217.50	196.00	181.50- 228.00	43	62	26	26	6	3	3	1	1	-	-	-	1	-	1	1	3	1	2	-	-
Receptionists	74	39.0	270.00	269.50	248.00- 301.00	-	2	2	11	10	20	10	17	1	1	-	-	-	-	-	-	-	-	-	-	-
Switchboard operators	140	39.5	306.50	291.00	244.50- 355.00	4	4	11	7	21	14	14	13	6	24	1	1	3	-	2	15	-	-	-	-	-
Manufacturing	63	39.5	312.00	319.50	273.50- 355.00	-	-	-	3	7	8	7	7	6	24	-	1	-	-	-	-	-	-	-	-	-
Nonmanufacturing	77	39.5	302.00	265.00	230.50- 400.50	4	4	11	4	14	6	7	6	-	-	1	-	3	-	2	15	-	-	-	-	-
Switchboard operator-receptionists	125	39.5	276.50	281.50	249.50- 297.50	-	-	9	10	32	11	34	16	6	2	1	3	1	-	-	-	-	-	-	-	-
Manufacturing	74	40.0	282.00	281.50	250.00- 290.50	-	-	2	8	17	9	24	1	6	2	1	3	1	-	-	-	-	-	-	-	-
Nonmanufacturing	51	39.0	268.50	262.50	242.50- 301.00	-	-	7	2	15	2	10	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Order clerks	180	39.5	319.50	312.00	299.50- 333.00	-	-	4	2	7	16	21	80	16	11	6	2	4	3	1	2	3	2	-	-	-
Manufacturing	165	39.5	323.50	312.00	300.00- 333.50	-	-	-	-	7	13	21	76	16	11	6	2	2	3	1	2	3	2	-	-	-
Order clerks I	68	39.5	296.00	312.00	261.50- 317.00	-	-	4	2	7	15	1	26	4	6	-	1	1	1	-	-	-	-	-	-	-
Manufacturing	55	40.0	305.50	312.00	268.00- 318.50	-	-	-	-	7	12	1	22	4	6	-	1	1	1	-	-	-	-	-	-	-
Order clerks II	112	39.5	334.50	312.00	312.00- 337.00	-	-	-	-	-	1	20	54	12	5	6	1	3	2	1	2	3	2	-	-	-
Manufacturing	110	39.5	333.00	312.00	312.00- 334.50	-	-	-	-	-	1	20	54	12	5	6	1	1	2	1	2	3	2	-	-	-
Accounting clerks	4,391	39.5	306.50	297.00	244.50- 346.50	30	204	266	386	511	415	430	609	358	200	194	190	144	190	22	31	20	180	11	-	-
Manufacturing	1,643	39.5	307.50	304.00	273.00- 337.00	-	6	21	75	185	130	258	326	201	150	112	60	22	13	5	18	1	-	-	-	-
Nonmanufacturing	2,748	40.0	306.00	282.00	231.00- 370.00	30	198	245	311	326	225	172	283	157	50	82	130	122	177	17	13	19	180	11	-	-
Transportation and utilities	1,030	40.0	394.00	400.00	333.50- 422.50	-	-	-	2	62	26	12	148	73	7	62	119	114	175	17	3	19	180	11	-	-
Accounting clerks I	462	40.0	233.50	225.00	202.00- 256.50	30	80	85	94	68	21	32	51	-	-	-	-	1	-	-	-	-	-	-	-	-
Nonmanufacturing	250	39.5	208.00	204.00	193.50- 219.50	30	80	81	36	12	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accounting clerks II	1,209	40.0	257.00	248.00	224.00- 285.00	-	122	134	194	284	141	135	98	31	18	3	43	-	-	-	-	-	-	6	-	-
Manufacturing	407	39.5	276.00	277.00	253.00- 303.50	-	4	16	15	98	84	82	71	19	10	2	6	-	-	-	-	-	-	-	-	-
Nonmanufacturing	802	40.0	246.50	237.50	212.00- 260.50	-	118	118	179	186	57	53	27	12	8	1	37	-	-	-	-	-	-	6	-	-
Accounting clerks III	1,751	39.5	312.50	308.50	270.50- 343.00	-	2	47	98	159	231	220	356	192	56	96	92	118	81	3	-	-	-	-	-	-
Manufacturing	550	39.5	308.50	304.00	282.50- 327.00	-	2	1	2	31	84	125	132	77	44	22	18	6	5	1	-	-	-	-	-	-
Nonmanufacturing	1,201	40.0	314.00	312.50	262.00- 370.00	-	-	46	96	128	147	95	224	115	12	74	74	112	76	2	-	-	-	-	-	-
Transportation and utilities	562	40.0	362.50	370.00	318.00- 402.50	-	-	-	-	-	24	2	145	69	1	61	72	110	76	2	-	-	-	-	-	-
Accounting clerks IV	969	39.5	393.00	371.00	333.00- 451.50	-	-	-	-	-	22	43	104	135	126	95	55	25	109	19	31	20	180	5	-	-
Manufacturing	474	39.5	351.00	344.00	325.00- 371.00	-	-	-	-	-	7	24	72	105	96	88	36	15	8	4	18	1	-	-	-	-
Nonmanufacturing	495	40.0	434.00	421.00	355.00- 513.50	-	-	-	-	-	15	19	32	30	30	7	19	10	101	15	13	19	180	5	-	-
Transportation and utilities	339	40.0	478.00	507.00	421.00- 520.50	-	-	-	-	-	-	-	-	-	4	-	10	4	99	15	3	19	180	5	-	-
Payroll clerks	263	40.0	339.00	311.50	271.50- 399.00	-	-	5	11	25	34	16	48	18	12	17	14	6	21	12	7	2	14	1	-	-
Manufacturing	109	40.0	333.50	310.50	298.00- 377.50	-	-	-	1	10	11	6	31	12	3	8	2	2	21	1	1	-	-	-	-	-
Nonmanufacturing	154	39.5	342.50	317.00	263.00- 399.50	-	-	5	10	15	23	10	17	6	9	9	12	4	-	11	6	2	14	1	-	-
Transportation and utilities	38	40.0	433.50	423.50	398.50- 513.00	-	-	-	-	1	2	-	-	3	-	3	6	4	-	1	1	2	14	1	-	-
Key entry operators	1,126	39.5	286.00	277.00	251.00- 305.00	2	3	38	109	214	243	187	132	87	24	12	14	20	-	11	25	4	1	-	-	-
Manufacturing	353	39.5	284.50	282.50	265.00- 299.00	-	-	3	5	55	101	103	47	26	3	5	3	1	-	1	-	-	-	-	-	-
Nonmanufacturing	773	39.5	287.00	273.00	245.00- 309.50	2	3	35	104	159	142	84	85	61	21	7	11	19	-	10	25	4	1	-	-	-
Transportation and utilities	106	40.0	395.00	402.00	334.50- 478.50	-	-	-	-	12	-	-	10	6	1	7	11	19	-	10	25	4	1	-	-	-

See footnotes at end of tables.

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Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[1]	Median[1]	Middle range[1]	160 and under 180	180 - 200	200 - 220	220 - 240	240 - 260	260 - 280	280 - 300	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 420	420 - 440	440 - 460	460 - 480	480 - 500	500 - 540	540 - 580	580 - 620	620 - 660
Key entry operators	407	39.5	263.50	251.00	234.00- 286.50	2	3	35	91	104	53	64	20	12	7	1	4	1	-	10	-	-	-	-	-	-
Manufacturing	171	39.5	276.00	281.00	256.50- 289.00	-	-	3	5	30	24	52	10	6	1	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	236	39.5	257.50	242.50	226.50- 270.00	2	3	32	86	74	29	12	10	6	6	1	4	1	-	10	-	-	-	-	-	-
Transportation and utilities	32	40.0	347.50	361.00	243.50- 440.00	-	-	-	-	12	-	-	1	2	1	1	4	1	-	10	-	-	-	-	-	-
Key entry operators II	719	40.0	299.00	287.00	265.50- 315.50	-	-	3	18	110	190	123	112	75	17	11	10	19	-	1	25	4	1	-	-	-
Manufacturing	222	39.5	290.00	283.00	266.00- 307.00	-	-	-	-	25	77	51	37	20	2	5	3	1	-	1	-	-	-	-	-	-
Nonmanufacturing	497	40.0	303.00	291.50	263.50- 322.00	-	-	3	18	85	113	72	75	55	15	6	7	18	-	-	25	4	1	-	-	-
Transportation and utilities	74	40.0	415.50	402.50	368.00- 478.50	-	-	-	-	-	-	-	9	4	-	6	7	18	-	-	25	4	1	-	-	-

See footnotes at end of tables.

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Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	Under 260	260 and under 280	280 - 300	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 420	420 - 440	440 - 460	460 - 480	480 - 520	520 - 560	560 - 600	600 - 640	640 - 680	680 - 720	720 - 760	760 - 800	800 and over
Computer systems analysts (business)	1,436	40.0	622.50	623.00	550.00- 692.50	-	-	-	-	-	-	1	2	7	11	38	46	122	171	194	212	222	175	121	76	38
Manufacturing	749	39.5	643.00	653.00	583.00- 706.00	-	-	-	-	-	-	1	-	2	4	9	22	39	73	78	112	137	114	84	51	23
Nonmanufacturing	687	40.0	600.00	595.00	529.00- 664.50	-	-	-	-	-	-	-	2	5	7	29	24	83	98	116	100	85	61	37	25	15
Transportation and utilities	161	40.0	639.50	634.50	577.00- 710.50	-	-	-	-	-	-	-	-	4	-	5	4	5	13	20	37	19	20	9	14	11
Computer systems analysts (business) I	170	40.0	522.00	513.00	471.00- 568.00	-	-	-	-	-	-	-	-	2	8	18	22	42	32	24	15	6	1	-	-	-
Manufacturing	95	40.0	506.50	494.00	462.50- 545.50	-	-	-	-	-	-	-	-	2	4	8	20	26	21	9	3	2	-	-	-	-
Nonmanufacturing	75	40.0	541.50	535.50	484.00- 599.00	-	-	-	-	-	-	-	-	-	4	10	2	16	11	15	12	4	1	-	-	-
Computer systems analysts (business) II	651	40.0	586.00	587.00	533.50- 636.00	-	-	-	-	-	-	1	-	4	2	12	18	80	132	126	121	95	41	12	7	-
Manufacturing	315	39.5	612.00	609.00	569.00- 653.00	-	-	-	-	-	-	1	-	-	-	1	2	13	52	68	74	59	27	11	7	-
Nonmanufacturing	336	40.0	561.50	551.00	509.00- 613.00	-	-	-	-	-	-	-	-	4	2	11	16	67	80	58	47	36	14	1	-	-
Transportation and utilities	74	40.0	598.50	632.00	559.50- 650.00	-	-	-	-	-	-	-	-	4	-	5	3	2	5	7	23	14	10	1	-	-
Computer systems analysts (business) III	615	39.5	689.00	692.50	643.50- 739.50	-	-	-	-	-	-	-	2	1	1	8	6	-	7	44	76	121	133	109	69	38
Manufacturing	339	39.5	710.50	704.00	668.00- 750.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	35	76	87	73	44	23
Nonmanufacturing	276	40.0	663.00	668.00	600.00- 724.00	-	-	-	-	-	-	-	2	1	1	8	6	-	7	43	41	45	46	36	25	15
Transportation and utilities	46	40.0	752.00	763.50	716.50- 798.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	9	8	14	* 11
Computer programmers (business)	1,909	39.5	498.00	487.50	409.00- 577.00	-	6	27	24	54	109	95	97	99	115	127	145	219	235	185	137	108	92	29	5	1
Manufacturing	1,035	40.0	541.50	549.00	468.50- 622.50	-	6	16	2	2	41	34	9	37	52	37	60	107	164	137	131	94	76	24	5	1
Nonmanufacturing	874	39.5	446.50	441.50	381.00- 494.50	-	-	11	22	52	68	61	88	62	63	90	85	112	71	48	6	14	16	5	-	-
Transportation and utilities	204	40.0	507.00	497.50	403.00- 572.00	-	-	-	-	1	1	14	33	6	8	10	15	29	30	21	5	10	16	5	-	-
Computer programmers (business) I	336	39.5	392.50	365.00	339.00- 455.00	-	6	19	12	47	74	46	1	20	19	12	21	35	18	5	1	-	-	-	-	-
Manufacturing	184	40.0	422.00	424.00	355.50- 494.50	-	6	16	-	1	35	12	1	16	17	10	14	33	17	5	1	-	-	-	-	-
Nonmanufacturing	152	39.5	357.50	346.00	336.50- 365.00	-	-	3	12	46	39	34	-	4	2	2	7	2	1	-	-	-	-	-	-	-
Computer programmers (business) II	945	39.5	480.50	478.00	405.50- 549.00	-	-	8	12	7	35	46	83	73	65	73	73	117	173	114	54	8	4	-	-	-
Manufacturing	490	40.0	519.00	534.50	467.50- 575.00	-	-	-	2	1	6	22	8	19	30	23	43	58	119	96	52	7	4	-	-	-
Nonmanufacturing	455	39.5	439.00	427.00	389.50- 490.50	-	-	8	10	6	29	24	75	54	35	50	30	59	54	18	2	1	-	-	-	-
Transportation and utilities	131	40.0	469.50	467.50	392.50- 533.00	-	-	-	-	1	1	7	33	5	7	9	6	19	24	16	2	1	-	-	-	-
Computer programmers (business) III	628	39.5	581.00	595.50	481.50- 664.00	-	-	-	-	-	-	3	13	6	31	42	51	67	44	66	82	100	88	29	5	1
Manufacturing	361	40.0	634.00	645.50	595.50- 687.00	-	-	-	-	-	-	-	-	2	5	4	3	16	28	36	78	87	72	24	5	1
Nonmanufacturing	267	39.0	509.00	481.00	452.00- 565.50	-	-	-	-	-	-	3	13	4	26	38	48	51	16	30	4	13	16	5	-	-
Transportation and utilities	55	40.0	618.50	649.50	536.50- 696.00	-	-	-	-	-	-	-	-	1	1	-	2	8	5	5	3	9	16	5	-	-
Computer operators	1,162	39.5	356.00	347.00	307.00- 392.50	59	104	68	134	167	130	122	118	95	43	25	13	36	34	12	1	1	-	-	-	-
Manufacturing	644	40.0	345.00	340.50	303.00- 383.00	50	69	35	78	82	86	71	67	34	30	11	6	18	4	2	-	1	-	-	-	-
Nonmanufacturing	518	39.5	369.50	357.00	318.00- 402.50	9	35	33	56	85	44	51	51	61	13	14	7	18	30	10	1	-	-	-	-	-
Transportation and utilities	133	40.0	446.50	452.50	402.50- 528.00	-	6	6	-	4	-	9	6	33	2	5	5	16	30	10	1	-	-	-	-	-
Computer operators I	236	40.0	295.00	281.50	265.50- 325.00	* * 33	80	28	28	38	12	9	5	1	-	-	1	-	-	1	-	-	-	-	-	-
Manufacturing	188	40.0	296.50	281.50	265.00- 324.50	28	62	19	26	28	10	7	5	1	-	-	1	-	-	1	-	-	-	-	-	-
Computer operators II	621	40.0	354.50	345.50	314.50- 386.50	26	22	37	97	107	87	63	51	59	28	14	2	3	21	3	-	1	-	-	-	-
Manufacturing	326	40.0	351.50	350.50	315.50- 384.50	22	5	15	49	42	57	42	40	19	26	7	-	1	-	-	-	1	-	-	-	-
Nonmanufacturing	295	39.5	357.50	336.00	308.50- 402.50	4	17	22	48	65	30	21	11	40	2	7	2	2	21	3	-	-	-	-	-	-
Transportation and utilities	82	40.0	428.50	402.50	402.50- 528.00	-	6	2	-	4	-	6	1	33	-	2	2	2	21	3	-	-	-	-	-	-

See footnotes at end of tables

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Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	Under 260	260 and under 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 – 760	760 – 800	800 and over
Computer operators III	305	39.5	406.50	388.50	361.00– 437.50	-	2	3	9	22	31	50	62	35	15	11	10	33	13	8	1	-	-	-	-	-
Manufacturing	130	39.5	400.00	383.00	353.50– 435.00	-	2	1	3	12	19	22	22	14	4	4	5	17	4	1	-	-	-	-	-	-
Nonmanufacturing	175	39.5	411.00	390.00	369.50– 440.00	-	-	2	6	10	12	28	40	21	11	7	5	16	9	7	1	-	-	-	-	-
Transportation and utilities	47	40.0	492.50	494.00	459.00– 540.50	-	-	-	-	-	-	3	5	-	2	3	3	14	9	7	1	-	-	-	-	-
Peripheral equipment operators	126	40.0	291.50	294.00	254.00– 322.50	# 39	14	18	17	21	5	4	4	3	1	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	60	40.0	260.00	259.50	235.50– 282.00	30	14	11	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Computer data librarians	62	40.0	308.00	296.00	253.00– 331.00	# # 16	6	12	12	4	3	2	1	1	-	2	2	-	1	-	-	-	-	-	-	-
Nonmanufacturing	53	40.0	308.50	296.00	253.00– 331.00	15	4	10	10	4	2	2	-	1	-	2	2	-	1	-	-	-	-	-	-	-
Drafters	970	40.0	441.50	427.50	378.00– 502.00	4	2	32	31	42	81	64	105	92	76	92	62	87	79	49	42	29	1	-	-	-
Manufacturing	901	40.0	445.00	429.50	382.50– 504.50	4	2	17	31	36	71	57	101	88	75	90	55	84	72	48	41	28	1	-	-	-
Nonmanufacturing	69	40.0	396.00	360.00	327.50– 469.00	-	-	15	-	6	10	7	4	4	1	2	7	3	7	1	1	1	-	-	-	-
Drafters II	68	40.0	336.00	334.50	313.00– 363.00	3	-	4	15	15	13	10	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	68	40.0	336.00	334.50	313.00– 363.00	3	-	4	15	15	13	10	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Drafters III	259	40.0	368.00	361.00	339.00– 404.50	1	2	28	11	23	60	30	31	29	19	24	1	-	-	-	-	-	-	-	-	-
Manufacturing	226	40.0	374.00	370.50	343.00– 407.50	1	2	13	11	19	50	30	29	27	19	24	1	-	-	-	-	-	-	-	-	-
Drafters IV	349	40.0	434.00	427.00	391.00– 465.00	-	-	-	4	4	8	23	65	51	50	49	27	40	25	3	-	-	-	-	-	-
Manufacturing	329	40.0	435.50	428.00	393.50– 466.00	-	-	-	4	2	8	16	63	49	49	47	26	39	23	3	-	-	-	-	-	-
Drafters V	291	39.5	540.50	540.00	480.00– 597.50	-	-	-	-	-	-	-	1	11	7	19	34	47	54	46	42	29	1	-	-	-
Manufacturing	275	39.5	541.50	541.00	481.00– 600.00	-	-	-	-	-	-	-	1	11	7	19	28	45	49	45	41	28	1	-	-	-
Electronics technicians	2,509	40.0	449.00	441.00	381.00– 507.00	1	-	1	2	251	215	149	220	191	216	212	209	312	220	159	95	51	4	1	-	-
Manufacturing	2,492	40.0	447.50	440.00	380.00– 505.50	1	-	1	2	251	215	149	220	191	216	212	209	312	220	159	95	35	3	1	-	-
Electronics technicians II	796	40.0	430.50	421.00	396.00– 455.00	-	-	-	-	3	3	63	167	144	127	111	62	75	39	2	-	-	-	-	-	-
Manufacturing	796	40.0	430.50	421.00	396.00– 455.00	-	-	-	-	3	3	63	167	144	127	111	62	75	39	2	-	-	-	-	-	-
Electronics technicians III	1,023	40.0	521.50	513.00	472.00– 568.00	-	-	-	-	-	-	-	3	16	62	89	144	237	181	157	95	35	3	1	-	-
Manufacturing	1,023	40.0	521.50	513.00	472.00– 568.00	-	-	-	-	-	-	-	3	16	62	89	144	237	181	157	95	35	3	1	-	-
Registered industrial nurses	72	39.5	480.50	470.00	445.50– 514.00	-	-	-	-	-	-	-	-	4	12	13	10	19	9	5	-	-	-	-	-	-

* Workers were distributed as follows: 10 at $800.00 to $840.00; and 1 at $840.00 to $880.00.

* * Workers were distributed as follows: 11 at $220.00 to $240.00; and 22 at $240.00 to $260.00.

Workers were distributed as follows: 9 at $200.00 to $220.00; 16 at $220.00 to $240.00; and 14 at $240.00 to $260.00.

Workers were distributed as follows: 2 at $220.00 to $240.00; and 14 at $240.00 to $260.00.

Also see footnotes at end of tables.

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Table A-14. Average weekly earnings of office, professional, and technical workers, by sex in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985

Sex,[4] occupation, and industry division	Number of workers	Average (mean[5])	
		Weekly hours[1] (standard)	Weekly earnings (in dollars)[2]
Office occupations - women			
Secretaries			
Nonmanufacturing	1,348	39.5	349.00
Transportation and utilities	224	40.0	400.00
Secretaries II	768	39.5	323.50
Manufacturing	441	39.5	321.00
Nonmanufacturing	327	39.5	327.00
Secretaries III			
Nonmanufacturing	561	39.5	340.50
Secretaries IV			
Nonmanufacturing	293	39.5	356.50
Secretaries V			
Nonmanufacturing	160	40.0	411.50
Stenographers			
Stenographers I	89	39.5	371.50
Nonmanufacturing	60	40.0	433.50
Transportation and utilities	60	40.0	433.50
Typists	446	39.5	297.00
Manufacturing	160	39.5	265.00
Nonmanufacturing	286	40.0	315.00
Typists I	304	39.5	298.00
Manufacturing	79	39.5	266.00
Nonmanufacturing	225	40.0	309.50
Typists II	142	39.5	294.50
Manufacturing	81	39.5	263.50
Word processors	388	39.5	310.50
Nonmanufacturing	187	39.0	311.50
Word processors I	141	39.5	286.50
Nonmanufacturing	79	39.0	285.50
Word processors II	247	39.5	324.50
Manufacturing	139	40.0	319.50
Nonmanufacturing	108	39.0	330.50
File clerks	167	39.0	211.00
Nonmanufacturing	154	39.0	210.50
File clerks I	84	39.0	210.00
Nonmanufacturing	81	39.0	210.50
File clerks II	55	38.5	193.00
Messengers	219	39.0	207.00
Manufacturing	88	39.0	208.00
Nonmanufacturing	131	39.5	206.50
Receptionists	69	39.0	269.50
Switchboard operators	122	39.5	289.00
Manufacturing	62	39.5	312.50
Switchboard operator-receptionists	125	39.5	276.50
Manufacturing	74	40.0	282.00
Nonmanufacturing	51	39.0	268.50
Order clerks	170	39.5	314.00
Manufacturing	155	39.5	318.00
Order clerks I	67	39.5	294.00
Manufacturing	54	40.0	303.00
Accounting clerks			
Manufacturing	1,450	39.5	305.00
Accounting clerks II			
Manufacturing	337	39.5	274.00
Accounting clerks III			
Manufacturing	476	39.0	303.00
Accounting clerks IV			
Manufacturing	453	39.5	352.00
Payroll clerks	239	40.0	332.00
Manufacturing	105	40.0	334.50
Nonmanufacturing	134	39.5	330.00
Key entry operators	962	39.5	280.50
Nonmanufacturing	684	39.5	279.00
Key entry operators I	365	39.5	263.50
Manufacturing	118	39.5	279.00
Nonmanufacturing	247	39.5	256.00
Transportation and utilities	28	40.0	362.50
Key entry operators II	597	39.5	291.00
Nonmanufacturing	437	40.0	291.50
Professional and technical occupations - men			
Computer systems analysts (business)			
Computer systems analysts (business) I			
Manufacturing	50	39.5	513.00
Computer programmers (business)			
Manufacturing	640	40.0	566.00
Computer programmers (business) I	190	39.5	391.00
Manufacturing	106	40.0	417.00
Nonmanufacturing	84	39.5	358.50
Computer programmers (business) III	405	39.5	611.00
Manufacturing	279	40.0	647.50
Computer operators			
Manufacturing	345	39.5	342.50
Computer operators I	126	40.0	286.50
Computer operators III	158	39.5	406.00
Manufacturing	85	39.5	409.50
Peripheral equipment operators	54	40.0	289.50
Drafters	778	40.0	449.00
Manufacturing	734	40.0	452.50
Drafters II	50	40.0	330.50
Manufacturing	50	40.0	330.50
Drafters III	197	40.0	370.50
Manufacturing	178	40.0	376.50
Drafters IV	263	40.0	434.50
Manufacturing	247	40.0	437.00
Drafters V	267	39.5	543.50
Manufacturing	258	39.5	544.00
Electronics technicians	2,255	40.0	453.00
Manufacturing	2,255	40.0	453.00
Electronics technicians II	695	40.0	432.50
Manufacturing	695	40.0	432.50
Electronics technicians III	991	40.0	522.50
Manufacturing	991	40.0	522.50
Professional and technical occupations - women			
Computer programmers (business)			
Computer programmers (business) I	140	39.5	393.50
Manufacturing	75	40.0	427.00
Nonmanufacturing	65	39.5	354.50
Computer programmers (business) III			
Manufacturing	82	39.5	587.50
Computer operators			
Computer operators I	106	40.0	307.00
Manufacturing	82	40.0	306.50
Peripheral equipment operators	72	40.0	293.00
Electronics technicians	237	40.0	399.00
Manufacturing	237	40.0	399.00
Electronics technicians II	101	40.0	414.00
Manufacturing	101	40.0	414.00
Registered industrial nurses	60	39.5	476.00

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Table A-15. Hourly earnings of maintenance, toolroom, and powerplant workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[2]			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean[3]	Median[3]	Middle range[3]	5.75 and under 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 15.50	15.50 – 16.00	16.00 – 16.50	16.50 and over
Maintenance carpenters	114	13.93	14.43	12.13–15.86	-	-	-	-	-	-	-	-	-	-	-	-	1	4	31	7	7	-	33	-	1	24	4	2
Manufacturing	60	13.54	14.43	12.22–14.43	-	-	-	-	-	-	-	-	-	-	-	-	-	4	13	4	5	-	33	-	1	-	-	-
Nonmanufacturing	54	14.36	15.86	12.13–15.86	-	-	-	-	-	-	-	-	-	-	-	-	1	-	18	3	2	-	-	-	-	24	4	2
Maintenance electricians	303	15.12	14.95	14.71–15.44	-	-	-	-	-	-	-	1	-	-	1	6	2	7	5	12	7	6	131	52	9	35	29
Manufacturing	281	15.00	14.95	14.71–15.44	-	-	-	-	-	-	-	1	-	-	1	6	2	7	5	12	4	4	131	52	9	34	13
Maintenance painters	64	13.94	14.43	12.89–15.01	-	-	-	-	-	-	-	-	-	-	-	4	3	2	5	2	-	4	26	-	15	1	-	2
Maintenance machinists	358	14.33	14.57	13.46–14.57	-	-	-	-	-	-	-	-	-	-	-	-	1	1	27	11	55	2	10	202	2	29	18	-
Manufacturing	317	14.18	14.57	13.46–14.57	-	-	-	-	-	-	-	-	-	-	-	-	1	1	27	11	55	2	-	202	-	-	18	-
Maintenance mechanics (machinery)	529	13.36	12.99	12.40–14.52	-	-	-	-	-	-	-	-	-	1	50	19	45	35	115	80	34	1	40	-	75	24	10	
Manufacturing	432	12.87	12.97	11.91–13.32	-	-	-	-	-	-	-	-	-	1	50	19	45	35	115	70	32	1	40	-	-	24	-	
Maintenance pipefitters	95	15.05	14.94	14.94–15.16	-	-	-	-	-	-	-	-	-	1	-	-	-	5	2	1	-	-	51	26	-	-	9
Manufacturing	86	14.73	14.94	14.94–15.16	-	-	-	-	-	-	-	-	-	1	-	-	-	5	2	1	-	-	51	26	-	-	-
Millwrights	154	14.36	14.43	14.43–14.51	-	-	-	-	-	-	-	-	-	-	-	-	2	9	1	1	-	78	44	19	-	-	-
Manufacturing	154	14.36	14.43	14.43–14.51	-	-	-	-	-	-	-	-	-	-	-	-	2	9	1	1	-	78	44	19	-	-	-
Motor vehicle mechanics	171	14.03	14.22	13.57–14.81	-	-	-	-	-	-	-	-	-	-	3	5	4	8	18	3	5	43	67	9	-	6	-
Nonmanufacturing	130	14.24	14.68	14.22–14.81	-	-	-	-	-	-	-	-	-	-	-	-	-	2	18	-	-	43	67	-	-	-	-
Transportation and utilities	85	14.24	14.22	14.22–14.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	32	39	-	-	-	-
Maintenance workers (general)	215	10.31	10.53	8.50–11.62	-	5	10	5	10	19	22	30	3	3	17	36	6	5	1	21	8	14	-	-	-	-	-
Manufacturing	148	10.13	9.82	8.50–11.21	-	-	-	-	9	16	20	28	3	3	15	34	-	-	1	19	-	-	-	-	-	-	-
Nonmanufacturing	67	10.71	11.62	7.41–13.94	-	5	10	5	1	3	2	2	-	-	2	2	6	5	-	2	8	14	-	-	-	-	-
Tool and die makers	454	14.31	15.28	13.61–15.28	-	-	-	-	-	-	-	-	-	16	-	41	1	-	22	12	52	19	13	275	2	1	-
Manufacturing	454	14.31	15.28	13.61–15.28	-	-	-	-	-	-	-	-	-	16	-	41	1	-	22	12	52	19	13	275	2	1	-
Stationary engineers	176	13.29	12.74	12.43–14.23	-	-	-	-	-	-	-	1	1	2	-	1	15	24	61	9	2	36	5	7	-	-	12
Manufacturing	72	13.37	13.32	12.43–14.42	-	-	-	-	-	-	-	1	1	-	-	-	6	10	10	9	2	26	-	7	-	-	-
Nonmanufacturing	104	13.24	12.73	12.40–14.23	-	-	-	-	-	-	-	-	-	2	-	1	9	14	51	-	-	10	5	-	-	-	• 12

• All workers were at $16.50 to $17.00.

Also see footnotes at end of tables.

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Table A-16. Hourly earnings of material movement and custodial workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[2]	Median[3]	Middle range[4]	4.00 and under 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 and over
Truckdrivers	1,228	13.47	14.14	12.61–14.14	–	–	1	–	–	–	–	6	–	16	5	20	17	122	18	5	79	72	57	4	662	–	* 144
Manufacturing	367	12.78	11.21	10.72–16.01	–	–	–	–	–	–	–	1	–	16	5	20	17	122	18	1	5	11	3	4	–	–	144
Truckdrivers, medium truck:																										
Manufacturing	187	10.95	10.72	10.25–10.72	–	–	–	–	–	–	–	1	–	16	–	20	17	110	3	–	–	–	–	–	–	–	20
Shippers	230	8.97	8.53	8.25– 9.07	–	–	–	–	–	–	–	2	107	50	32	5	–	6	19	1	2	–	–	2	4	–	–
Manufacturing	202	8.64	8.25	8.25– 8.85	–	–	–	–	–	–	–	2	107	50	29	1	–	1	12	–	–	–	–	–	–	–	–
Receivers	150	10.84	11.22	9.42–13.15	–	2	–	–	4	–	–	1	7	16	8	20	3	6	17	7	21	–	38	–	–	–	–
Manufacturing	107	10.85	10.68	9.26–13.15	–	–	–	–	2	–	–	–	5	16	7	17	3	6	10	3	–	–	38	–	–	–	–
Shippers and receivers	146	10.27	10.64	8.13–13.94	–	–	25	5	–	–	–	1	7	13	12	–	5	6	10	24	–	–	1	2	35	–	–
Manufacturing	59	10.52	10.64	9.15–11.96	–	–	–	–	–	–	–	1	2	11	7	–	5	6	3	24	–	–	–	–	–	–	–
Nonmanufacturing	87	10.10	11.01	5.45–14.10	–	–	25	5	–	–	–	–	5	2	5	–	–	–	7	–	–	–	1	2	35	–	–
Warehousemen	1,034	12.26	12.47	10.72–14.24	–	–	–	–	–	–	–	–	32	82	73	–	41	100	–	160	36	21	4	49	436	–	–
Manufacturing	279	9.55	9.26	8.64–10.16	–	–	–	–	–	–	–	–	32	82	67	–	39	16	–	42	–	1	–	–	–	–	–
Nonmanufacturing	755	13.26	14.24	11.80–14.24	–	–	–	–	–	–	–	–	–	–	6	–	2	84	–	118	36	20	4	49	436	–	–
Transportation and utilities	31	11.63	12.42	10.15–12.47	–	–	–	–	–	–	–	–	–	–	6	–	2	–	–	–	22	1	–	–	–	–	–
Order fillers	489	9.72	9.79	8.50–10.53	22	12	–	10	4	4	10	14	8	106	6	134	5	67	–	14	–	3	3	1	66	–	–
Manufacturing	302	9.69	9.79	8.90–10.53	–	–	–	–	–	–	–	–	–	102	–	118	1	67	–	14	–	–	–	–	–	–	–
Shipping packers	462	8.68	8.15	7.95– 9.54	–	–	–	1	–	–	–	156	80	6	100	81	24	–	–	14	–	–	–	–	–	–	–
Manufacturing	462	8.68	8.15	7.95– 9.54	–	–	–	1	–	–	–	156	80	6	100	81	24	–	–	14	–	–	–	–	–	–	–
Material handling laborers	594	9.41	9.56	8.50–10.64	–	35	32	4	3	1	1	41	4	95	80	16	112	108	19	6	4	2	6	–	–	–	25
Manufacturing	461	9.90	9.56	8.85–10.64	–	–	3	–	1	1	1	41	3	95	80	16	64	108	17	–	–	–	6	–	–	–	25
Nonmanufacturing	133	7.71	5.96	4.90–10.37	–	35	29	4	2	–	–	–	1	–	–	–	48	–	2	6	4	2	–	–	–	–	–
Forklift operators	592	11.19	10.75	10.16–12.14	–	–	1	–	–	–	1	48	–	1	19	15	77	141	–	121	57	1	38	10	62	–	–
Manufacturing	472	10.73	10.75	10.14–11.53	–	–	–	–	–	–	–	42	–	1	19	15	77	141	–	121	17	1	38	–	–	–	–
Power-truck operators (other than forklift)	65	10.71	11.15	9.08–11.46	–	–	–	–	–	–	–	–	–	–	23	–	8	–	18	4	–	12	–	–	–	–	–
Manufacturing	61	10.64	10.08	9.08–11.46	–	–	–	–	–	–	–	–	–	–	23	–	8	–	18	–	–	12	–	–	–	–	–
Guards	606	9.91	9.79	8.92–10.34	–	–	6	2	4	20	41	13	31	48	37	142	119	1	–	82	–	26	34	–	–	–	–
Manufacturing	416	10.16	10.34	9.79–10.34	–	–	–	–	4	10	15	3	19	4	11	132	119	1	–	81	–	12	5	–	–	–	–
Nonmanufacturing	190	9.36	8.92	7.61– 9.92	–	–	6	2	–	10	26	10	12	44	26	10	–	–	–	1	–	14	29	–	–	–	–
Guards I	446	10.18	10.34	9.79–11.54	–	–	6	2	4	12	19	5	19	4	11	132	119	1	–	52	–	26	34	–	–	–	–
Manufacturing	386	10.02	9.79	9.79–10.34	–	–	–	–	4	10	15	3	19	4	11	132	119	1	–	51	–	12	5	–	–	–	–
Janitors, porters, and cleaners	4,088	6.56	5.17	4.87– 8.34	8	1279	810	328	83	36	219	106	240	115	403	34	140	193	3	49	23	18	1	–	–	–	–
Manufacturing	1,029	9.21	9.23	8.46– 9.75	–	2	4	3	8	11	32	30	185	[illegible]	4	29	108	124	1	–	–	18	1	–	–	–	–
Nonmanufacturing	3,059	5.66	5.00	4.73– 5.74	8	1277	806	325	75	25	187	76	55		9	5	32	69	2	49	23	–	–	–	–	–	–
Transportation and utilities	216	10.54	10.61	10.29–11.53	–	–	–	–	–	–	–	19	5	13	4	–	32	69	2	49	23	–	–	–	–	–	–

* All workers were at $16.00 to $16.50.

Also see footnotes at end of tables.

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Table A-17. Average hourly earnings of maintenance, toolroom, powerplant, material movement and custodial workers by sex in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, January 1985

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[3]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	109	14.00
Manufacturing	60	13.54
Maintenance electricians	302	15.13
Manufacturing	281	15.00
Maintenance painters	63	13.97
Maintenance machinists	358	14.33
Manufacturing	317	14.18
Maintenance mechanics (machinery)	527	13.36
Manufacturing	432	12.87
Maintenance pipefitters	95	15.05
Manufacturing	86	14.73
Millwrights	154	14.36
Manufacturing	154	14.36
Maintenance workers (general)	199	10.56
Manufacturing	144	10.18
Tool and die makers	454	14.31
Manufacturing	454	14.31
Stationary engineers	172	13.31
Manufacturing	72	13.37
Nonmanufacturing	100	13.27
Material movement and custodial occupations - men		
Truckdrivers		
Manufacturing	367	12.78
Truckdrivers, medium truck		
Manufacturing	187	10.95
Shippers	203	8.96
Manufacturing	187	8.67
Receivers	109	11.45
Manufacturing	70	11.74
Shippers and receivers	146	10.27
Manufacturing	59	10.52
Nonmanufacturing	87	10.10
Warehousemen	853	12.86
Manufacturing	131	10.50
Order fillers	327	10.49
Manufacturing	222	9.81
Material handling laborers	543	9.50
Manufacturing	425	9.98
Forklift operators	566	11.22
Manufacturing	448	10.72
Power-truck operators (other than forklift)	65	10.71
Manufacturing	61	10.64
Janitors, porters, and cleaners	2,535	6.51
Nonmanufacturing	1,819	5.50
Material movement and custodial occupations - women		
Order fillers	162	8.15
Janitors, porters, and cleaners		
Nonmanufacturing	1,057	5.15

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Footnotes

Some of these standard footnotes may not apply to this bulletin.

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these weekly hours.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Cost-of-living allowances and incentive payments, however, are included.

[3] The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—one-half of the workers receive the same as or more and one-half receive the same as or less than the rate shown. The middle range is defined by two rates of pay; one-fourth of the workers earn the same as or less than the lower of these rates and one-fourth earn the same as or more than the higher rate.

[4] Earnings data relate only to workers whose sex identification was provided by the establishment.

[5] Estimates for periods ending prior to 1976 relate to men only for skilled maintenance and unskilled plant workers. All other estimates relate to men and women.

[6] Data do not meet publication criteria or data not available.

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Appendix A. Scope and Method of Survey

In each of the 70 areas currently surveyed, the Bureau obtains wages and related benefits data from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Government operations and the construction and extractive industries are excluded. Small establishments—generally those with fewer than 50 employees—are excluded because they have few incumbents in the occupations studied. Appendix table 1 shows the number of establishments and workers estimated to be within the scope of this survey, as well as the number actually studied.

Bureau field representatives obtain data by personal visits at 3-year intervals. In each of the two intervening years, only information on employment and occupational earnings is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

A sample of the establishments in the scope of the survey is selected for study prior to each personal visit survey. This sample, minus establishments which go out of business or are no longer within the industrial scope of the survey, is retained for the following two annual surveys. In most cases, establishments new to the area are not considered in the scope of the survey until the selection of a sample for a personal visit survey.

The sampling procedures involve detailed stratification of all establishments within the scope of an individual area survey by industry and number of employees. From this stratified universe a probability sample is selected, with each establishment having a predetermined chance of selection. To obtain optimum accuracy at minimum cost, a greater proportion of large than small establishments is selected. When data are combined, each establishment is weighted according to its probability of selection so that unbiased estimates are generated. For example, if one out of four establishments is selected, it is given a weight of 4 to represent itself plus three others. An alternate of the same original probability is chosen in the same industry-size classification if data are not available from the original sample member. If no suitable substitute is available, additional weight is assigned to a sample member that is similar to the missing unit.

Occupations and earnings

Occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance, toolroom, and powerplant; and (4) material movement and custodial. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. Occupations selected for study are listed and described in appendix B, along with corresponding occupational codes and titles from the 1980 edition of the *Standard Occupational Classification Manual*.

Unless otherwise indicated, the earnings data following the job titles are for all industries combined. Earnings data for some of the occupations listed and described, or for some industry divisions within the scope of the survey, are not presented in the A-series tables because either (1) data were insufficient to provide meaningful statistical results, or (2) there is possibility of disclosure of individual establishment data. Separate men's and women's earnings data are not presented when the number of workers not identified by sex is 20 percent or more of the men or women identified in an occupation. Earnings data not shown separately for industry divisions are included in data for all industries combined. Likewise, for occupations with more than one level, data are included in the overall classification when a subclassification is not shown or information to subclassify is not available.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Cost-of-living allowances and incentive payments, however, are included. Weekly hours for office clerical and professional and technical occupations refer to the standard workweek (rounded to the nearest half hour) for which employees receive regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations are rounded to the nearest half dollar. Most A-series tables provide distributions of workers by earnings; changes in the size of earnings intervals are indicated by heavy vertical lines.

These surveys measure the level of occupational earnings in an area at a particular time. Changes in an occupational average over time reflect, in addition to earnings changes, factors such as changes in proportions of workers employed by high- or low-wage firms, or high-wage workers advancing to better jobs and being replaced by new workers at lower rates. Such shifts in employment could decrease an occupational

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average even though most establishments in an area increase wages during the year. Changes in earnings of occupational groups, shown in table A-7, are better indicators of wage trends than are earnings changes for individual jobs within the groups.

Average earnings reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing, and thus contribute differently to the estimates for each job. Pay averages may fail to reflect accurately the wage differential among jobs in individual establishments.

Average pay levels for men and women in selected occupations should not be assumed to reflect differences in pay of the sexes within individual establishments. Factors which may contribute to differences include progression within established rate ranges (only the rates paid incumbents are collected) and performance of specific duties within the general survey job descriptions. Job descriptions used to classify employees in these surveys usually are more generalized than those used in individual establishments and allow for minor differences among establishments in specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because occupational structures among establishments differ, estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not affect materially the accuracy of the earnings data.

Wage trends for selected occupational groups

Indexes in table A-7 measure wages at a given time, expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percent change in wages from the base period to the date of the index. The percent increases in table A-7 relate to wage changes between the indicated dates. Annual rates of increase, where shown, reflect the amount of increase for 12 months when the time span between surveys was other than 12 months. These computations are based on the assumption that wages increased at a constant rate between surveys.

The indexes and percent increases are based on changes in average hourly earnings of men and women in establishments reporting the trend jobs in both the current and previous year (matched establishments). The data are adjusted to remove the effect on average earnings of employment shifts among establishments and turnover of establishments included in survey samples. The percent increases, however, are still affected by factors other than wage increases. Turnover may affect an establishment average for an occupation when workers are paid under plans providing a range of wage rates for individual jobs. In periods of increased hiring, for example, new employees may enter at the bottom of the range, depressing the average without a change in wage rates.

Occupations used to compute wage trends are:

Office clerical

Secretaries
Stenographers I and II
Typists I and II
File clerks I, II, and III
Messengers
Switchboard operators
Order clerks I and II
Accounting clerks I, II, III, and IV
Payroll clerks
Key entry operators I and II

Electronic data processing

Computer systems analysts I, II, and III
Computer programmers I, II, and III
Computer operators I, II, and III

Industrial nurses

Registered industrial nurses

Skilled maintenance

Carpenters
Electricians
Painters
Machinists
Mechanics (machinery)
Pipefitters
Motor vehicle mechanics
Tool and die makers

Unskilled plant

Janitors, porters, and cleaners
Material handling laborers

Percent changes for individual areas in the program are computed as follows:

1. Average earnings are computed for each occupation for the 2 years being compared. The averages are derived from earnings in those establishments which are in the survey both years; it is assumed that employment remains unchanged.

2. Each occupation is assigned a weight based on its proportionate employment in the occupational group.

3. These weights are used to compute group averages. Each occupation's average earnings (computed in step 1) are multiplied by its weight. The products are totaled to obtain a group average.

4. The ratio of group averages for 2 consecutive years is computed by dividing the average for the current year by the average for the earlier year. The result—expressed as a percent—less 100 is the percent change.

The index is computed by adding 100 to the most recent percent increase, multiplying the total by the previous year's index number, and dividing the product by 100 to obtain the current index value.

Pay relationships in establishments

Tables A-8 through A-11 compare average pay of occupations in individual establishments. These comparisons, expressed as pay relatives (pay for one of the occupations equals 100), yield different results than comparisons of overall survey averages, such as those shown in tables A-1 through A-6. The latter reflect differences in contributions to the survey averages by establishments with disparate pay levels; the pay relative comparisons are not affected by such differences. The following procedures are used to compute relatives in tables A-8 through A-11:

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1. Establishments employing workers in both of the paired occupations were identified.
2. Pay levels (averages) for the two occupations were weighted by the combined employment of both jobs to reflect each establishment's contribution to the totals used in this comparison.
3. The weighted pay levels of the two jobs were summed separately; each total was divided by the other and the quotients multiplied by 100 to produce the two pay relatives shown for each job pairing.

Establishment practices and employee benefits

Tabulations on selected establishment practices and employee benefits (B-series tables) are not presented in this bulletin. Information for these tabulations is collected at 3-year intervals. These tabulations on minimum entrance salaries for inexperienced office workers; shift differentials; scheduled weekly hours and days; paid holidays; paid vacations; health, insurance, and retirement plans; and other selected benefits are presented (in the B-series tables) in the previous bulletin for this area.

Appendix table 1. Establishments and workers within scope of survey and number studied in Minneapolis-St. Paul, MN-WI,[1] January 1985

Industry division[2]	Minimum employment in establishments in scope of survey	Number of establishments		Workers in establishments		
		Within scope of survey[3]	Studied	Within scope of survey[4]		Studied
				Number	Percent	
All establishments						
All divisions	-	1,996	244	522,748	100	231,850
Manufacturing	50	614	76	213,625	41	118,298
Nonmanufacturing	-	1,382	168	309,123	59	113,552
Transportation, communication, and other public utilities[5]	50	121	34	46,807	9	34,438
Wholesale trade[6]	50	246	22	33,108	6	5,362
Retail trade[6]	50	487	36	116,249	22	32,641
Finance, insurance, and real estate[6]	50	174	27	43,358	8	14,112
Services[7]	50	354	49	69,601	13	26,999
Large establishments						
All divisions	-	146	75	275,059	100	203,035
Manufacturing	500	64	35	135,220	49	110,513
Nonmanufacturing	-	82	40	139,839	51	92,522
Transportation, communication, and other public utilities[5]	500	10	9	30,871	11	30,196
Wholesale trade[6]	500	5	3	4,680	2	2,665
Retail trade[6]	500	36	14	58,239	21	29,058
Finance, insurance, and real estate[6]	500	19	7	22,988	8	10,862
Services[7]	500	12	7	23,061	8	19,741

[1] The Minneapolis-St. Paul, MN-WI Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, Washington, and Wright Counties, MN, and St. Croix County, WI. The "workers within scope of survey" estimates provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels since (1) planning of wage surveys requires establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

[2] The 1972 edition of the *Standard Industrial Classification Manual* was used to classify establishments by industry division. All government operations are excluded from the scope of the survey.

[3] Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of nonmanufacturing companies are considered as one establishment when located within the same industry division.

[4] Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.

[5] Abbreviated to "transportation and utilities" in the A-series tables. Taxicabs and services incidental to water transportation are excluded.

[6] Separate data for this division are not presented in the A-series tables, but the division is represented in the "all industries" and "nonmanufacturing" estimates.

[7] Hotels and motels, laundries and other personal services, business services, automobile repair, rental, and parking; motion pictures, nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

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Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping of occupational wage rates representing comparable job content. Because of this emphasis on comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

The titles and 2, 3, or 4-digit codes below the job titles in this appendix are taken from the 1980 edition of the *Standard Occupational Classification Manual (SOC)* , issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. The BLS occupation, "Registered Industrial Nurse," for example, is limited to workers providing medical assistance and other related services (e.g., health education) to persons who are ill or become ill or suffer an injury in a factory or other establishment. The SOC occupation (code 29) includes a variety of registered nurses (e.g., school nurse, head nurse, general duty nurse, private duty nurse) that are excluded from the BLS description.

Thus, in comparing the results of this survey with other sources, factors such as differences in occupational definitions and survey scope should be taken into consideration.

Office

SECRETARY

(4622: Secretary)

Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office.

Exclusions. Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

a. Clerks or secretaries working under the direction of secretaries or administrative assistants as described in e;

b. Stenographers not fully performing secretarial duties;

c. Stenographers or secretaries assigned to two or more professional, technical, or managerial persons of equivalent rank;

d. Assistants or secretaries performing any kind of technical work, e.g., personnel, accounting, or legal work;

e. Administrative assistants or supervisors performing duties which are more difficult or more responsible than the secretarial work described in LR-1 through LR-4;

f. Secretaries receiving additional pay primarily for maintaining confidentiality of payroll records or other sensitive information;

g. Secretaries performing routine receptionist, typing, and filing duties following detailed instructions and guidelines; these duties are less responsible than those described in LR-1 below;

h. Trainees.

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Classification by level. Secretary jobs which meet the required characteristics are matched at one of five levels according to two factors: (a) Level of the secretary's supervisor within the overall organizational structure, and (b) level of the secretary's responsibility. The table following the explanations of these factors indicates the level of the secretary for each combination of factors.

Level of Secretary's Supervisor (LS)

Secretaries should be matched at one of the three LS levels below best describing the organization of the secretary's supervisor.

LS-1

Organizational structure is not complex and internal procedures and administrative controls are simple and informal: supervisor directs staff through face-to-face meetings.

LS-2

Organizational structure is complex and is divided into subordinate groups that usually differ from each other as to subject matter, function, etc.; supervisor usually directs staff through intermediate supervisors; internal procedures and administrative controls are formal. An entire organization (e.g., division, subsidiary, or parent organization) may contain a variety of subordinate groups which meet the LS-2 definition. Therefore, it is not unusual for one LS-2 supervisor to report to another LS-2 supervisor.

The presence of subordinate supervisors does not by itself mean LS-2 applies, e.g., a clerical processing organization divided into several units, each performing very similar work, is placed in LS-1.

In smaller organizations or industries such as retail trades, with relatively few organizational levels, the supervisor may have an impact on the policies and major programs of the entire organization, and may deal with important outside contacts, as described in LS-3.

LS-3

Organizational structure is divided into two or more subordinate supervisory levels (of which at least one is a managerial level) with several subdivisions at each level. Executive's program(s) are usually interlocked on a direct and continuing basis with other major organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls. Executive typically has: Financial decisionmaking authority for assigned program(s); considerable impact on the entire organization's financial position or image; and responsibility for, or has staff specialists in, such areas as personnel and administration for assigned organization. Executive plays an important role in determining the policies and major programs of the entire organization, and spends considerable time dealing with outside parties actively interested in assigned program(s) and current or controversial issues.

Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor or staff, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at the level best describing their level of responsibility. When a position's duties span more than one LR level, the introductory paragraph at the beginning of each LR level should be used to determine which of the levels best matches the position. (Typically, secretaries performing at the higher levels of responsibility also perform duties described at the lower levels.)

LR-1

Carries out recurring office procedures independently. Selects the guideline or reference which fits the specific case. Supervisor provides specific instructions on new assignments and checks completed work for accuracy. Performs varied duties including or comparable to the following:

a. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail and assures timely staff response; may send form letters;
b. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms;
c. Reviews materials prepared for supervisor's approval for typographical accuracy and proper format;
d. Maintains recurring internal reports, such as: time and leave records, office equipment listings, correspondence controls, training plans, etc.;
e. Requisitions supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.

LR-2

Handles differing situations, problems, and deviations in the work of the office according to the supervisor's general instructions, priorities, duties, policies, and program goals. Supervisor may assist secretary with special assignments. Duties include or are comparable to the following:

a. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, appropriate staff member, or other offices. May prepare and sign routine, nontechnical correspondence in own or supervisor's name;
b. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and assembles established background materials, as directed. May attend meetings and record and report on the proceedings;
c. Reviews outgoing materials and correspondence for internal consistency and conformance with supervisor's procedures; assures that proper clearances have been obtained, when needed;
d. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers nonroutine requests to supervisor or staff;
e. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.

LR-3

Uses greater judgment and initiative to determine the approach or action to take in nonroutine situations. Interprets and adapts guidelines, including unwritten policies, precedents, and practices, which are not always completely applicable to changing situations. Duties include or are comparable to the following:

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a. Based on a knowledge of the supervisor's views, composes correspondence on own initiative about administrative matters and general office policies for supervisor's approval;
b. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc;, and informs supervisor on matters to be considered;
c. Reads publications, regulations, and directives and takes action or refers those that are important to the supervisor and staff;
d. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general direction;
e. Advises secretaries in subordinate offices on new procedures; requests information needed from the subordinate office(s) for periodic or special conferences, reports, inquiries, etc. Shifts clerical staff to accommodate workload needs.

LR-4

Handles a wide variety of situations and conflicts involving the clerical or administrative functions of the office which often cannot be brought to the attention of the executive. The executive sets the overall objectives of the work. Secretary may participate in developing the work deadlines. Duties include or are comparable to the following:

a. Composes correspondence requiring some understanding of technical matters; may sign for executive when technical or policy content has been authorized;
b. Notes commitments made by executive during meetings and arranges for staff implementation. On own initiative, arranges for staff member to represent organization at conferences and meetings, establishes appointment priorities, or reschedules or refuses appointments or invitations;
c. Reads outgoing correspondence for executive's approval and alerts writers to any conflict with the file or departure from policies or executive's viewpoints; gives advice to resolve the problems;
d. Summarizes the content of incoming materials, specially gathered information, or meetings to assist executive; coordinates the new information with background office sources; draws attention to important parts or conflicts;
e. In the executive's absence, ensures that requests for action or information are relayed to the appropriate staff member; as needed, interprets request and helps implement action; makes sure that information is furnished in timely manner; decides whether executive should be notified of important or emergency matters.

Exclude secretaries performing any of the following duties:

Acts as office manager for the executive's organization, e.g., determines when new procedures are needed for changing situations and devises and implements alternatives; revises or clarifies procedures to eliminate conflict or duplication; identifies and resolves various problems that affect the orderly flow of work in transactions with parties outside the organization.

Prepares agenda for conferences; explains discussion topics to participants; drafts introductions and develops background information and prepares outlines for executive or staff member(s) to use in writing speeches.

Advises individuals outside the organization on the executive's views on major policies or current issues facing the organization; contacts or responds to contacts from high-ranking outside officials (e.g., city or State officials, members of Congress, presidents of national unions or large national or international firms, etc.) in unique situations. These officials may be relatively inaccessible, and each contact typically must be handled differently, using judgment and discretion.

Criteria For Matching Secretaries By Level

Level of Secretary's Supervisor	Level of Secretary's Responsibility			
	LR-1	LR-2	LR-3	LR-4
LS-1	I	II	III	IV
LS-2	I	III	IV	V
LS-3	I	IV	V	V

STENOGRAPHER

(4623: Stenographer)

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings.

Excluded from this definition are:

a. Trainee positions not requiring a fully qualified stenographer;
b. Secretaries providing the principal secretarial support in an office and performing more responsible and discretionary tasks, as described in LR-1 through LR-4 in the secretary definition above;
c. Stenographers who take dictation involving the frequent use of a wide variety of technical or specialized vocabulary. Typically this kind of vocabulary cannot be learned in a relatively short period of time, e.g., a month or two;
d. Stenographers, such as shorthand reporters, who record material verbatim at hearings, conferences, or similar proceedings.

Stenographer I

Takes and transcribes dictation, receiving specific assignments along with detailed instructions on such requirements as form and presentation. The transcribed material is typically reviewed in rough draft, and the final transcription is reviewed for conformance with the rough draft. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer II

Takes and transcribes dictation determining the most appropriate format. Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I. Supervisor typically provides general instructions. Work requires a thorough working knowledge of general business and office procedures and of the specific business operations, organizations, policies, procedures, files, workflow, etc.

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Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc.

TYPIST

(4624: Typist)

Uses a manual, electric, or automatic typewriter to type various materials. Included are automatic typewriters that are used only to record text and update and reproduce previously typed items from magnetic cards or tape. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Excluded from this definition is work that involves:

a. Typing directly from spoken material that has been recorded on disks, cylinders, belts, tapes, or other similar media;
b. The use of varitype machines, composing equipment, or automatic equipment in preparing material for printing; and
c. Familiarity with specialized terminology in various keyboard commands to manipulate or edit the recorded text to accomplish revisions, or to perform tasks such as extracting and listing items from the text, or transmitting text to other terminals, or using "sort" commands to have the machine reorder material. Typically requires the use of automatic equipment which may be either computer linked or have a programmable memory so that material can be organized in regularly used formats or preformed paragraphs which can then be coded and stored for future use in letters or documents.

Typist I

Performs *one or more of the following:* Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs *one or more of the following:* Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

WORD PROCESSOR

(4624: Typist)

Primary duty is to operate word-processing equipment to enter, store, retrieve, change, and present text or tabulations. Produces a variety of printed copy such as letters, documents, or reports. May enter regularly used formats or stored paragraphs that are organized and coded for future use. Recorded texts can be changed by rearranging paragraphs, replacing words, shifting lines, etc.

(Word-processing equipment typically has a full- or partial-page video-display screen (CRT) and a separate printer. The equipment may be integrated with a digital computer, have telecommunications capabilities, and also have capabilities for adding to or upgrading features. Automatic or electronic typewriters with limited text-editing capabilities, and often with single-line electronic display "windows," are not considered word-processing equipment.)

Excluded from this definition are:

a. Workers whose primary function is to enter a data base for purposes other than composition (see key entry operator);
b. Workers who use equipment and data base for purposes such as accounting, inventory control, sales, or original writing and editing;
c. Workers responsible for preparation of published reports, including page layout or selection of different type sizes.

Positions are classified into levels on the basis of the following definitions:

Word Processor I

Performs tasks requiring a knowledge of the word-processing equipment and familiarity with the formats and forms used in the establishment. Proficiency in grammar, spelling, and punctuation is also required to produce printed materials accurately. May refer problems to supervisor or higher level processor, or refer to operating manual.

Word Processor II

Work at this level requires considerable classroom or on-the-job training and may involve working directly with task originator rather than through supervisor. In addition to work assignments described for level I, duties include *one or more of the following:*

a. Uses the more sophisticated features of the equipment to carry out complex assignments, such as sorting, merging, and organizing text, or maintaining files;
b. Applies knowledge of specialized terminology or foreign language;
c. Tests new applications and procedures; or
d. Trains lower level processors.

FILE CLERK

(4696: File clerk)

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions:

File Clerk I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

File Clerk II

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

MESSENGER

(4745: Messenger)

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening mail, distributing mail on a regularly scheduled route or in a familiar area, and other minor clerical work. May deliver mail that requires some special handling, e.g., mail that is insured, registered, or marked for special delivery.

Excluded are positions which include any of the following as significant duties:

a. Operating motor vehicles;
b. Delivering valuables or security-classified mail when the work requires a continuing knowledge of special procedures for handling such items;
c. Weighing mail, determining postage, or recording and controlling registered, insured, and certified mail in the mail room;
d. Making deliveries to unfamiliar or widely separated buildings or points which are not part of an established route; or
e. Directing other workers.

RECEPTIONIST

(4645: Receptionist)

Greets visitors, determines nature of visits, and directs visitors to appropriate persons. Receptionist duties may also include providing information, making appointments, answering a telephone (other than switchboard or console), keeping a log of visitors, and issuing visitor passes. May also perform typing or other routine clerical duties which may occupy a major portion of time, and are usually performed at the reception desk.

This classification excludes workers operating a telephone switchboard or console, performing guard duties, or performing more difficult clerical duties.

SWITCHBOARD OPERATOR

(4732: Telephone operator)

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming, outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, may also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard operator-receptionist.

SWITCHBOARD OPERATOR-RECEPTIONIST

(4645: Receptionist)

At a single-position telephone switchboard or console, acts both as an operator—see Switchboard operator—and as a receptionist. Receptionist's work involves such duties as greeting visitors; determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

ORDER CLERK

(4664: Order clerk)

Receives written or verbal customers' purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgment of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order. *Exclude workers paid on a commission basis or whose duties include any of the following:* Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

Order Clerk I

Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

Order Clerk II

Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

ACCOUNTING CLERK

(4712: Bookkeeper and accounting and auditing clerk)

Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

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Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV *require* a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

PAYROLL CLERK

(4713: Payroll and timekeeping clerk)

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves *most of the following*: Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions; editing payroll listings against source records; tracing and correcting errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

KEY ENTRY OPERATOR

(4793: Data entry keyer)

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

Key Entry Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Key Entry Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

Professional and Technical

COMPUTER SYSTEMS ANALYST, BUSINESS

(1712: Computer systems analyst)

Analyzes business problems to formulate procedures for solving them by use of electronic data processing equipment. Develops a complete description of all specifica-

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tions needed to enable programmers to prepare required digital computer programs. Work involves *most of the following*: Analyzes subject-matter operations to be automated and identifies conditions and criteria required to achieve satisfactory results; specifies number and types of records, files, and documents to be used; outlines actions to be performed by personnel and computers in sufficient detail for presentation to management and for programming (typically this involves preparation of work and data flow charts); coordinates the development of test problems and participates in trial runs of new and revised systems; and recommends equipment changes to obtain more effective overall operations. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or systems analysts primarily concerned with scientific or engineering problems.

For wage study purposes, systems analysts are classified as follows:

Computer Systems Analyst I

Works under immediate supervision, carrying out analyses as assigned, usually of a single activity. Assignments are designed to develop and expand practical experience in the application of procedures and skills required for systems analysis work. For example, may assist a higher level systems analyst by preparing the detailed specifications required by programmers from information developed by the higher level analyst.

Computer Systems Analyst II

Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited complexity because sources of input data are homogeneous and the output data are closely related. (For example, develops systems for maintaining depositor accounts in a bank, maintaining accounts receivable in a retail establishment, or maintaining inventory accounts in a manufacturing or wholesale establishment.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of the data processing systems to be applied. *OR*

Works on a segment of a complex data processing scheme or system, as described for level III. Works independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system.

Computer Systems Analyst III

Works independently or under only general direction on complex problems involving all phases of systems analysis. Problems are complex because of diverse sources of input data and multiple-use requirements of output data. (For example, develops an integrated production scheduling, inventory control, cost analysis, and sales analysis record in which every item of each type is automatically processed through the full system of records and appropriate follow-up actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes recommendations, if needed, for approval of major systems installations or changes and for obtaining equipment.

May provide functional direction to lower level systems analysts who are assigned to assist.

COMPUTER PROGRAMMER, BUSINESS

(3971: Programmer, business)

Converts statements of business problems, typically prepared by a systems analyst, into a sequence of detailed instructions which are required to solve the problems by automatic data processing equipment. Working from charts or diagrams, the programmer develops the precise instructions which, when entered into the computer system in coded language, cause the manipulation of data to achieve desired results. Work involves *most of the following*: Applies knowledge of computer capabilities, mathematics, logic employed by computers, and particular subject matter involved to analyze charts and diagrams of the problem to be programmed; develops sequence of program steps; writes detailed flow charts to show order in which data will be processed; converts these charts to coded instructions for machine to follow; tests and corrects programs; prepares instructions for operating personnel during production run; analyzes, reviews, and alters programs to increase operating efficiency or adapt to new requirements; maintains records of program development and revisions. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or programmers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programmers are classified as follows:

Computer Programmer I

Makes practical applications of programming practices and concepts usually learned in formal training courses. Assignments are designed to develop competence in the application of standard procedures to routine problems. Receives close supervision on new aspects of assignments; and work is reviewed to verify its accuracy and conformance with required procedures.

Computer Programmer II

Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments) usually process information to produce data in two or three varied sequences or formats. Reports and listings are produced by refining, adapting, arraying, or making minor additions to or deletions from input data which are readily available. While numerous records may be processed, the data have been refined in prior actions so that the accuracy and sequencing of data can be tested by using a few routine checks. Typically, the program deals with routine recordkeeping operations. *OR*

Works on complex programs (as described for level III) under close direction of a higher level programmer or supervisor. May assist higher level programmer by independently performing less difficult tasks assigned, and performing more difficult tasks under fairly close direction. May guide or instruct lower level programmers.

Computer Programmer III

Works independently or under only general direction on complex problems which require competence in all phases of programming concepts and practices. Working from diagrams and charts which identify the nature of desired results, major processing steps to be accomplished, and the relationships between various steps of the problem solving routine; plans the full range of programming actions needed to efficiently utilize the computer system in achieving desired end products.

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At this level, programming is difficult because computer equipment must be organized to produce several interrelated but diverse products from numerous and diverse data elements. A wide variety and extensive number of internal processing actions must occur. This requires such actions as development of common operations which can be reused, establishment of linkage points between operations, adjustments to data when program requirements exceed computer storage capacity, and substantial manipulation and resequencing of data elements to form a highly integrated program.

May provide functional direction to lower level programmers who are assigned to assist.

COMPUTER OPERATOR

(4612: Computer operator)

In accordance with operating instructions, monitors and operates the control console of a digital computer to process data. Executes runs by either serial processing (processes one program at a time) or multiprocessing (processes two or more programs simultaneously). The following duties characterize the work of a computer operator:

a. Studies operating instructions to determine equipment setup needed;
b. Loads equipment with required items (tapes, cards, disks, paper, etc.);
c. Switches necessary auxiliary equipment into system;
d. Starts and operates computer;
e. Responds to operating and computer output instructions;
f. Reviews error messages and makes corrections during operation *or* refers problems;
g. Maintains operating record.

May test-run new or modified programs. May assist in modifying systems or programs. The scope of this definition includes trainees working to become fully qualified computer operators, fully qualified computer operator, and lead operators providing technical assistance to lower level operators. It excludes workers who monitor and operate remote terminals.

For wage study purposes, computer operators are classified as follows:

Computer Operator I

Work assignments are limited to established production runs (i.e., programs which present few operating problems). Assignments may consist primarily of on-the-job training (sometimes augmented by classroom instruction). When learning to run programs, the supervisor or a higher level operator provides detailed written or oral guidance to the operator before and during the run. After the operator has gained experience with a program, however, the operator works fairly independently in applying standard operating or corrective procedures in responding to computer output instructions or error conditions, but refers problems to a higher level operator or the supervisor when standard procedures fail.

Computer Operator II

In addition to established production runs, work assignments include runs involving new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). At this level, the operator has the training and experience to work fairly independently in carrying out most assignments. Assignments may require the operator to select from a variety of standard setup and operating procedures. In responding to computer output instructions or error conditions, applies standard operating or corrective procedures, but may deviate from standard procedures when standard procedures fail if deviation does not materially alter the computer unit's production plans. Refers the problem or aborts the program when procedures applied do not provide a solution. May guide lower level operators.

Computer Operator III

In addition to work assignments described for Computer operator II (see above) the work of Computer operator III involves at least one of the following:

a. Deviates from standard procedures to avoid the loss of information or to conserve computer time even though the procedures applied materially alter the computer unit's production plans;
b. Tests new programs, applications, and procedures;
c. Advises programmers and subject-matter experts on setup techniques;
d. Assists in (1) maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; and/or (3) switching to emergency backup procedures (such assistance requires a working knowledge of program language, computer features, and software systems).

An operator at this level typically guides lower level operators.

PERIPHERAL EQUIPMENT OPERATOR

(4613: Peripheral equipment operator)

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

a. Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy;
b. Labeling tape reels, disks, or card decks;
c. Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives;
d. Setting controls which regulate operation of the equipment;
e. Observing panel lights for warnings and error indications and taking appropriate action;

f. Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see Computer operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

COMPUTER DATA LIBRARIAN

(4696: File clerk)
(4754: Stock and inventory clerk)

Maintains library of media (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and returns, inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

DRAFTER

(372: Drafting occupation)

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

a. Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
b. Illustrating work requiring artistic ability;
c. Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
d. Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
e. Supervisory work involving the management of a drafting program or the supervision of drafters.

Positions are classified into levels on the basis of the following definitions.

Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot-checked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

Drafter II

Prepares drawings of simple, easily visualized parts of equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

Drafter V

Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

ELECTRONICS TECHNICIAN

(3711: Electrical and electronic engineering technologist and technician)
(615: Electrical and electronic equipment repairer)

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling,

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troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes, but is not limited to, the following: (a) Electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.

Positions are classified into levels on the basis of the following definitions:

Electronics Technician I

Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

Electronics Technician II

Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically *can* be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; and judgment in determining work sequence and in selecting tools and testing instruments, usually less complex than those used by the level III technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

Electronics Technician III

Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically *cannot* be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

REGISTERED INDUSTRIAL NURSE

(29: Registered nurse)

A registered nurse gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve *a combination of the following*: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

Maintenance, Toolroom, and Powerplant

MAINTENANCE CARPENTER

(6422: Carpenter)

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves *most of the following*: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE ELECTRICIAN

(615: Electrical and electronic equipment repairer)
(6432: Electrician)

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves *most of the following*: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE PAINTER

(6442: Painter, construction and maintenance)

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work *involves the following*: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MACHINIST

(613: Industrial machinery repairer)

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves *most of the following*: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MECHANIC (MACHINERY)

(613: Industrial machinery repairer)

Repairs machinery or mechanical equipment of an establishment. Work involves *most of the following*: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines; and making all necessary adjustments for operation. In general, the work of a machinery maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose *primary duties* involve setting up or adjusting machines.

MAINTENANCE PIPEFITTER

(645: Plumber, pipefitter, and steamfitter)

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves *most of the following*: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. *Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.*

MILLWRIGHT

(6178: Millwright)

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves *most of the following*: Planning and laying out work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; aligning and balancing equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

MOTOR VEHICLE MECHANIC

(611: Vehicle and mobile equipment mechanic and repairer)

Repairs, rebuilds, or overhauls major assemblies of internal combustion automobiles, buses, trucks, or tractors of an establishment. Work involves most of the following: Diagnosing the source of trouble and determining the extent of repairs required; replacing worn or broken parts such as piston rings, bearings, or other engine parts; grinding and adjusting valves; rebuilding carburetors; overhauling transmissions; and repairing fuel injection, lighting, and ignition systems. In general, the work of the motor vehicle mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

This classification does not include mechanics who repair customers' vehicles or who only perform minor repair and tuneup of motor vehicles. It does, however, include fully qualified journeymen mechanics even though most of their time may be spent on minor repairs and tuneups.

GENERAL MAINTENANCE WORKER

(6179: Mechanic and repairer, not elsewhere classified)

Performs general maintenance and repair of building structures and their mechanical, electrical, or sanitary systems. May also perform general maintenance and repair of the establishment's machinery. Work requires a basic practical knowledge of several maintenance trades in order to perform most of the following: Keeping in good repair building woodwork; replacing electrical switches, fixtures, and motors; occasional painting or touching up of structure or equipment; repairing or replacing plumbing fixtures; and replacing broken window panes.

Excluded are positions requiring a formal apprenticeship or equivalent training in one or more crafts. Also excluded are workers participating in such a program.

MAINTENANCE TRADES HELPER

(863: Helper; mechanic and repairer)
(864: Helper; construction trades)

Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR (TOOLROOM)

(6813: Machinist)
(731-2: Metalworking and plasticworking machine setup operator)

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves:* Planning and performing difficult machining operations which require complicated setups or a high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

For cross-industry wage study purposes, this classification does *not* include machine-tool operators (toolroom) employed in tool and die jobbing shops.

TOOL AND DIE MAKER

(6811: Tool and die maker)

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves:* Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete task; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, the tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, this classification does *not* include tool and die makers who (1) are employed in tool and die jobbing shops or (2) produce forging dies (die sinkers).

STATIONARY ENGINEER

(6931: Stationary engineer)

Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water, or electricity. Duties involve: Observing and interpreting readings on gauges, meters, and charts which register various aspects of the system's operation; adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery, and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.

The classification excludes head or chief engineers in establishments employing more than one engineer; workers required to be skilled in the repair of electronic control equipment; workers in establishments producing electricity, steam, or heated or cooled air primarily for sale; and boiler tenders.

Material Movement and Custodial

TRUCKDRIVER

(821: Motor vehicle operator)

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. *Salesroute and over-the-road drivers are excluded.*

For wage study purposes, truckdrivers are classified by type and rated capacity of truck, as follows:

Truckdriver, light truck
(straight truck, under 1 1/2 tons, usually 4 wheels)
Truckdriver, medium truck
(straight truck, 1 1/2 to 4 tons inclusive, usually 6 wheels)
Truckdriver, heavy truck
(straight truck, over 4 tons, usually 10 wheels)
Truckdriver, tractor-trailer

SHIPPER AND RECEIVER

(4753: Traffic, shipping and receiving clerk)

Performs *clerical and physical* tasks in connection with shipping goods of the establishment in which employed and receiving incoming shipments. In performing

day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received.

Shippers typically are responsible for most of the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; preparing and keeping records of goods shipped, e,g., manifests, bills of lading.

Receivers typically are responsible for most of the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.

For wage study purposes, workers are classified as follows:

Shipper
Receiver
Shipper and receiver

WAREHOUSEMAN

(4754: Stock and inventory clerk)

As directed, performs a *variety* of *warehousing* duties which require an *understanding of the establishment's storage plan*. Work involves *most of the following*: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.

Exclude workers whose *primary* duties involve shipping and receiving work (see Shipper and receiver and Shipping packer), order filling (see Order filler), or operating power trucks (see Power-truck operator).

ORDER FILLER

(4754: Stock and inventory clerk)

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

SHIPPING PACKER

(8761: Hand packer and packager)

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and *may involve one or more of the following*: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. *Packers who also make wooden boxes or crates are excluded.*

MATERIAL HANDLING LABORER

(8726: Freight, stock, and material mover, not elsewhere classified)

Performs physical tasks to transport or store materials or merchandise. Duties involve *one or more of the following:* Manually loading or unloading freight cars, trucks, or other transporting devices; unpacking, shelving, or placing items in proper storage locations; or transporting goods by handtruck, cart, or wheelbarrow.

Excluded from this definition are workers whose primary function involves:

a. Participating directly in the production of goods (e.g., moving items from one production station to another or placing them on or removing them from the production process);
b. Stocking merchandise for sale;
c. Counting or routing merchandise;
d. Operating a crane or heavy-duty motorized vehicle such as forklift or truck;
e. Loading and unloading ships (longshore workers), or
f. Traveling on trucks beyond the establishment's physical location to load or unload merchandise.

POWER-TRUCK OPERATOR

(8318: Industrial truck and tractor equipment operator)

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of powertruck, as follows:

Forklift operator
Power-truck operator (other than forklift)

GUARD

(5144: Guard and police, except public service)

Protects property from theft or damage, or persons from hazards or interference. Duties involve serving at a fixed post, making rounds on foot or by motor vehicle, or escorting persons or property. May be deputized to make arrests. May also help visitors and customers by answering questions and giving directions.

Guards employed by establishments which provide protective services on a contract basis are included in this occupation.

For wage study purposes, guards are classified as follows:

Guard I

Carries out instructions primarily oriented toward insuring that emergencies and security violations are readily discovered and reported to appropriate authority. Intervenes directly only in situations which require minimal action to safeguard property or persons. Duties require minimal training. Commonly, the guard is not

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required to demonstrate physical fitness. May be armed, but generally is not required to demonstrate proficiency in the use of firearms or special weapons.

Guard II

Enforces regulations designed to prevent breaches of security. Exercises judgment and uses discretion in dealing with emergencies and security violations encountered. Determines whether first response should be to intervene directly (asking for assistance when deemed necessary and time allows), to keep situation under surveillance, or to report situation so that it can be handled by appropriate authority. Duties require specialized training in methods and techniques of protecting security areas. Commonly, the guard is required to demonstrate continuing physical fitness and proficiency with firearms or other special weapons.

JANITOR, PORTER, OR CLEANER

(5244: Janitor and cleaner)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve *a combination of the following*: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing are excluded.*

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Area Wage Survey Summaries

The following areas are surveyed periodically. Reports on the surveys are available at no cost from any of the Bureau's regional offices while supplies last.

Alaska (statewide)
Albany, GA
Albuquerque, NM
Alexandria-Leesville, LA
Alpena-Standish-Tawas City, MI
Ann Arbor, MI
Asheville, NC
Atlantic City, NJ
Augusta, GA-SC
Austin, TX
Bakersfield, CA
Baton Rouge, LA
Battle Creek, MI
Beaumont-Port Arthur-Orange and Lake Charles, TX-LA
Biloxi-Gulfport and Pascagoula-Moss Point, MS
Binghamton, NY
Birmingham, AL
Bloomington-Vincennes, IN
Bremerton-Shelton, WA
Brunswick, GA
Champaign-Urbana-Rantoul, IL
Charleston-North Charleston-Walterboro, SC
Charlotte-Gastonia, NC
Cheyenne, WY
Clarksville-Hopkinsville, TN-KY
Colorado Springs, CO
Columbia-Sumter, SC
Columbus, GA-AL
Columbus, MS
Connecticut (statewide)
Decatur, IL
Des Moines, IA
Dothan, AL
Duluth-Superior, MN-WI
El Paso-Alamogordo-Las Cruces, TX-NM
Eugene-Springfield-Medford, OR
Fayetteville, NC
Fort Lauderdale-Hollywood and West Palm Beach-Boca Raton, FL
Fort Smith, AR-OK
Fort Wayne, IN
Frederick-Hagerstown-Chambersburg, MD-PA
Gadsden and Anniston, AL
Goldsboro, NC
Grand Island-Hastings, NE
Guam, Territory of
Harrisburg-Lebanon, PA
Knoxville, TN
Laredo, TX
Las Vegas-Tonopah, NV
Lima, OH
Little Rock-North Little Rock, AR
Logansport-Peru, IN
Lorain-Elyria, OH
Lower Eastern Shore, MD-VA-DE
Macon, GA
Madison, WI
Maine (statewide)
Mansfield, OH
McAllen-Pharr-Edinburg and Brownsville-Harlingen-San Benito, TX
Melbourne-Titusville-Cocoa, FL
Meridian, MS
Middlesex, Monmouth, and Ocean Counties, NJ
Mobile-Pensacola-Panama City, AL-FL
Montana (statewide)
Montgomery, AL
Nashville-Davidson, TN
New Bern-Jacksonville, NC
New Hampshire (statewide)
North Dakota (statewide)
Northern New York
Northwest Texas
Orlando, FL
Oxnard-Simi Valley-Ventura, CA
Peoria, IL
Phoenix, AZ
Pine Bluff, AR
Portsmouth-Chillicothe-Gallipolis, OH
Pueblo, CO
Puerto Rico
Raleigh-Durham, NC
Reno, NV
Riverside-San Bernardino-Ontario, CA
Salina, KS
Salinas-Seaside-Monterey, CA
Sandusky, OH
Santa Barbara-Santa Maria-Lompoc, CA
Savannah, GA
Selma, AL
Sherman-Denison, TX
Shreveport, LA
South Dakota (statewide)
Southeastern Massachusetts
Southwest Virginia
Spokane, WA
Stockton, CA
Tacoma, WA
Tampa-St. Petersburg, FL
Topeka, KS
Tucson-Douglas, AZ
Tulsa, OK
Upper Peninsula, MI
Vallejo-Fairfield-Napa, CA
Vermont (statewide)
Waco and Killeen-Temple, TX
Waterloo-Cedar Falls, IA
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Western and Northern Massachusetts
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ALSO AVAILABLE—

An annual report on salaries for accountants, auditors, public accountants, chief accountants, attorneys, job analysts, directors of personnel, buyers, chemists, engineers, engineering technicians, drafters, computer operators, and clerical employees is available. Order as BLS Bulletin 2208, *National Survey of Professional, Administrative, Technical and Clerical Pay, March 1984*, from any of the BLS regional sales offices shown on the back cover, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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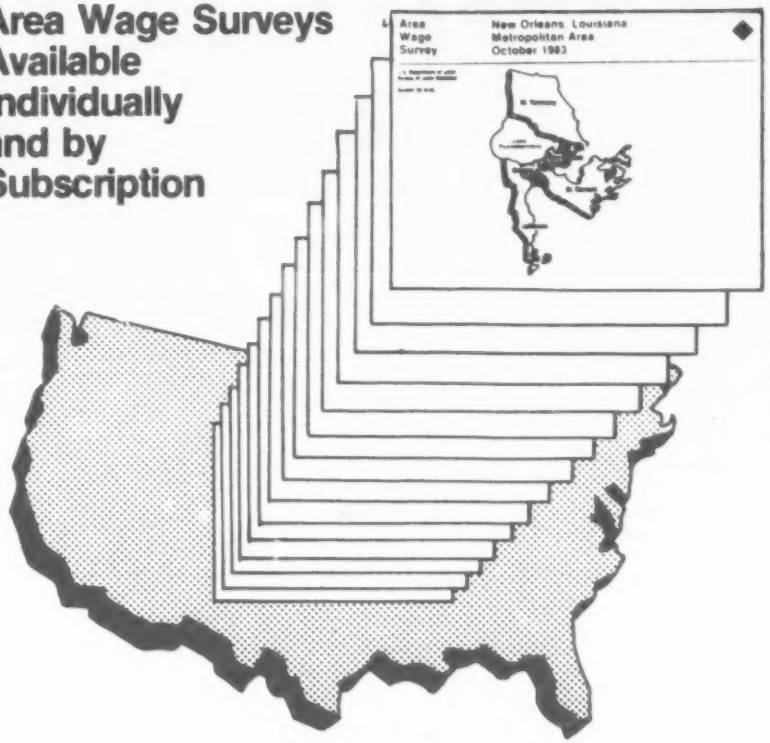
Area Wage Surveys Available Individually and by Subscription



Area	Bulletin No.	Price
☐ Albany—Schenectady—Troy, NY, Sept. 1984	3025-43	$1.75
☐ Anaheim—Santa Ana—Garden Grove, CA, Oct. 1984	3025-58	$2.25
☐ Atlanta, GA, May 1984	3025-18	$4.00
☐ Baltimore, MD, Aug. 1984	3025-39	$2.25
☐ Billings, MT, July 1984	3025-33	$1.75
☐ Boston, MA, Aug. 1984	3025-46	$2.25
☐ Buffalo, NY, Oct. 1984	3025-64	$2.25
☐ Chattanooga, TN—GA, Sept. 1984	3025-40	$2.25
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☐ Cincinnati, OH—KY—IN, July 1984	3025-26	$3.75
☐ Cleveland, OH, Sept. 1984	3025-44	$2.25
☐ Columbus, OH, Oct. 1984	3025-50	$2.25
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☐ Dayton, OH, Dec. 1984	3025-61	$1.75
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☐ Denver—Boulder, CO, Dec. 1984	3025-67	$2.25
☐ Detroit, MI, Apr. 1984	3025-12	$3.75
☐ Fresno, CA, June 1984	3025-27	$3.25
☐ Gainesville, FL, Sept. 1984	3025-42	$1.50
☐ Gary–Hammond–East Chicago, IN, Nov. 1984	3025-57	$1.75
☐ Green Bay, WI, Aug. 1984	3025-29	$2.25
☐ Greensboro—Winston-Salem—High Point, NC, Aug. 1984	3025-34	$1.75
☐ Greenville—Spartanburg, SC, June 1984	3025-19	$3.25
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☐ Jacksonville, FL, Dec. 1984	3025-60	$1.75
☐ Kansas City, MO—KS, Sept. 1984	3025-45	$2.25
☐ Los Angeles—Long Beach, CA, Oct. 1984	3025-65	$2.25
☐ Louisville, KY—IN, Nov. 1984	3025-54	$1.75
☐ Memphis, TN—AR—MS, Nov. 1984	3025-58	$1.75
☐ Miami, FL, Oct. 1984	3025-48	$2.25
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☐ Portland, OR—WA, June 1984	3025-28	$1.75
☐ Poughkeepsie, NY, Sept. 1984	3025-53	$1.50
☐ Providence—Warwick—Pawtucket, RI—MA, June 1984	3025-25	$3.75
☐ Richmond, VA, June 1984	3025-22	$3.50
☐ St. Louis, MO—IL, Mar. 1984	3025-13	$3.75
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☐ Salt Lake City—Ogden, UT, Nov. 1984	3025-68	$2.25
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☐ San Diego, CA, Dec. 1984	3025-62	$1.75
☐ San Francisco—Oakland, CA, Mar. 1984	3025-16	$4.00
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